



DATE.



Report of Material Rec'd 1933 by Herbert Ritter

179

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	TO WHOM	FROM OR CHARACTER OF.	TO WHOM.	
Feb 2	V	Reward for Loburn	90 ft 7/8 Cram chain		Rge 1
" "	V	" " the Gladys - Steamer Co	2 Barrels oil	100 lbs	28
" "	V	Rew for the house	3000 ft 14" flat Roast and Roll		C 1
" "	V	" " 14" half round Boland Roll			1
" "	V	1/2" x 27" Pipe Thread Cork	3. 14" half round Boland Roll	Cart 2-17. Handling fees 26-2013	" "
Jan 31	V	Reward for the house	4 pds 4X16X31 7in.	248	C 29
Feb 1	V	" "	4" 4X8X16 "	171	29
" "	V	" "	2" 8X12X16 "	298	"
" "	V	" "	1" 8X12X16 " and 2 130 ft x 12x3	48	"
" "	V	" "	1 Pds 8 1/2 X 10 X 9. 00 ft	63	Rge 3
" "	V	" "	6 Pds 2 1/2 X 12 X 16 3in	284	28
" "	V	" "	2 Pds 2 1/2 X 6 X 20 "	53	" "
" "	V	" "	24 ft 2 1/2 X 12 X 10 "	720	29
" "	V	" "	1 Pds 7 1/2 X 7 1/2 X 3 7in (3 returned from Oct 24th 3/8/30)	7in	28
" "	V	" "	6 Pds 3 1/2 X 10 1/2 X 36 7in Retained to be Syed to 2 1/2 " 7in 4 "	" "	"
" "	V	" "	6" 3 X 10 1/2 X 16 "	" "	28
" "	V	" "	2" 2 1/2 X 10 X 30 7in	" "	"
" "	V	" "	3 Pds 5 X 10 X 16 "	" "	"
" "	V	" "	1" 5 X 9 X 16 "	" "	"
" "	V	" "	10" 5 X 9 X 18 "	" "	"
" "	V	" "	35" 1 X 12 X 16 Sap pine Replaced wood and glass + strips	c 2	"
" "	K	" "	6" 13 1/2 X 12 X 16 6in	28	"
" "	V	" "	1" 8 X 11 X 6 6in Retained by Oct 24th 3/8/30 until needed	" "	"
" "	V	" "	1" 8 X 12 X 17 2nd 14 Y Pine	" "	"
Feb 6	V	" structure	3 Cm Browns		" 28
" 16	" "	" "	10 gals Coal oil		
" "	" "	" "	10 ft Bleach oil		
" "	" "	" "	1 1/2 " Bleach Permit		
" "	" "	" "	30 lbs Colloids		
" "	" "	" "	10" Colloids waste		
" 17	V	" "	6 15 ft 1" pine	161 lbs	c 4
" "	V	" "	305 3/4 "	48 lbs	" 5
" "	V	" "	1 Box 1/2 " painted packing	2578 "	"
" 18	V	Rew for doo the house	1/2 - 2 1/2 ft 6 1/2 ft 6 in safety valve & pipe fittings - 100 lbs		
" 20	V	" " Steamer	1 Pds 8 X 11 X 6 6in		c 4
" "	V	" "	1" 7 1/2 X 7 1/2 X 3 "		
" "	V	" "	7" 2 1/2 X 6 X 16 "		
" 21	V	" "	35" 1 X 12 X 16 Sap pine stripped R Dam	Rg 6	
" 24	V	" "	1 Doz Cans 1 lbs Can Soda	" 5	
" "	V	" "	3 gals Linseed oil	" 4	
" "	V	" "	1000 ft 1/2 - 2 1/2 ft 6 in safety valve & pipe fittings		
" "	V	" "	1" 8 in chest packed & valve blocked		
" "	V	" "	2 new safety valves filled in diverse form	" "	
" "	V	" "	2 steamer leather	" "	
" "	V	" "	2 Superior pine panel	" "	
" "	V	" "	2 stems pine leather	" "	
" "	V	" "	holes in 3 leaves fitted for bolts	" "	
" "	V	" "	4 10 ft 11 1/2 in stay bolts	" "	
" 27	V	" "	1 Box 78 Gondole packing		c 4
" 28	V	" "	1 Ball Lamp shade		Rge 4
March 1	V	3 in General store house	2 Browns		
" 7	V	" "	1 1/2 gals 2 instead of 3 gals - 1 can handle come off		Rge 4
" 15	V	1 Ball asbestos Jacking	1 1/2 lbs		c 7
" 20	V	2 Sheets galv Iron	28 ft 9 1/2		"
" 23	V	4. Sheets N 20 Tinny Cloth	" "		"
" "	V	1 gross N 18 1/2 wood serum	" "		"
" 23	V	2 lbs Smokes niblets	" "		"
" "	V	1 Soap Barber	" "		"
" "	V	1 roll "	" "		"
" "	V	4 Soaps	" "		"
" "	V	2 Vegetable Dishes	" "		"
" "	V	2 8 ft pie pans	" "		"
" "	V	1 Bread platter	" "		"
" "	V	1 Large platter	" "		"
" "	V	1 Table wine bottle	" "		"
" "	V	6 Peanut dishes	" "		"
" 24	V	10 ft 14 x 2" flat sum	170 lbs		"
" "	V	2 Doz long Hds rd pointed shores	" "		"

HISTORICAL ASSESSMENT
PROPERTY OF

Port Clinton, Pa. 19548

Report of Material Received April 1933

Report of material Received July 1933

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Reg. C 10	1 pc.	10x12x17 creo 2nd y. P.	Cards, 27245 at Gibraltar	July 27	1933
	14 "	12x12x18 2nd yd. y. P.			
	14 "	" 12 " " "			
	11 "	10x12x16 " " "			
	12 "	12x12x10 " " "			
	11 "	11. 16 " " "			
	11 "	3x10x14 Oak			
	11 "	6x8x12 fir			
	32 "	4x8x16 "			
	933' Sec. 7ft 2" y. P. plank				
Reg. C 12	Pinekess cement	4 lbs.	at old car shops	Aug. 3rd. 1933	
" "	14 lbs wire-nails	50 lbs	" " " "	" " "	
" "	14 lbs " " " "	50 "	" " " "	" " "	
" "	1 Keg 7" cut Spikes	100 "	" " " "	" " "	
" "	12 Lbseed Oil	1 gal "	" " " "	" 10 1933	
" "	C 15 3/4 Pine, manila line	150' or 7ft 2" baggage	" " " "	" 21 1933	
" "	C 15 Ruberoid Roofing 1 Roll	108 Sq ft at	" " " "	" 22 1933	order no 898
" "	C 17 Ruberoid Roofing 3 "	324 " " " "	" " " "	" 29 "	
" "	C 15 1/2 bar solder	2 lbs. " " " "	" " " "	" 29 "	
Reg. C 16	962 1/2 bag cement	1 bag	at old car shop	" " "	
" "	10 1/2 " Faded Saw files	6 "	at old car shop	Sept. 1 "	
" "	15 1/2 " nuts	5 lbs. "	" " " "	Aug. 29 "	
" "	15 1/2 corn lonsos	2 "	" " " "	Sept. 1 "	
" "	15 2 pes. 2x4x4.6" N.C. pine	" " " "	Reely freight	Sept. 2 "	order no 898
" "	15 1/2 " " " "	" " " "	" " " "	" 2 "	" " " "
" "	C 15 1/2 x 6x 16 W.P. German Siding	" " " "	" " " "	" 2 "	" " " "
" "	C 19 1/2 Roll Ruberoid Roofing	" " " "	" " " "	" 50 "	
" "	C 18 1/2 Bags cement	" " " "	from Storehouse	" 20 "	
" "	C 18 1/2 "	" " " "	" " " "	" 26 "	
" "	C 18 3200# 9 Gravel Rec. from 21/2 Davis Jr. & co West Consolidation	" " " "	" 18 "		
" "	C 18 5400# 3/4 Stone	" " " "	" " " "	" 18 "	
" "	C 18 5 bags Sand	" " " "	" " " "	" 20 "	
" "	C 18 3600# 9 Gravel	" " " "	" " " "	" 25 "	
" "	C 18 500# 3/4 Stone	" " " "	" " " "	" 25 "	
" "	C 18 28 bags cement	" " " "	" " " "	" 25 "	
" "	C 20 20-78 x 12" Rock Spikes 26# Reely freight	" " " "	" " " "	" 25 "	
" "	C 20 5 Keg 5" cut Spikes 50# " " " "	" " " "	" " " "	" 25 "	
" "	C 18 1/2 12x12x12 creo. y. P. Rec. at Penoyd Ray. # 21231	" " " "	" 27 "		
" "	2 " 6x12 1/2 x 24 fir new	" " " "			
" "	2 " 16 " " "	" " " "			
" "	8 " 5 1/2 x 8 x 22 "	" " "			
" "	3 " 4 x 8 x 16 "	" " "			
" "	1 " 10 x 12 x 16 creo. y. P. Sec. 7ft. P.	" " "			
" "	3 " 10 x 12 x 5 "	" " " "			
" "	1 " 4 x 8 x 24 Sec. 7ft. P.	" " " "			
" "	1 " 8 x 10 x 15 fir new	" " " "			
" "	1 " 4 x 5 1/2 x 18 "	" " "			
" "	1 " 4 x 5 1/2 x 38 "	" " "			
" "	1 " 3 x 10 x 16 "	" " "			
" "	2 " 2 x 12 x 16 "	" " "			
" "	3 " 2 x 10 x 16 "	" " "			
" "	1 " 2 x 12 x 16 Oak good quality	" " " "			
" "	1 " 8 "	" " " "			
" "	2 " 2 x 3 x 16 "	" " "			
Reg. C 19	2 " 3 x 4 x 16 N.C. pine new	" " " "			
" "	1 " 2 x 12 x 16 fir new	" " " "			
" "	15 " 2 x 10 x 16 "	" " "			
" "	4 " 2 x 12 x 12 W.P. #3 Barn	" " "			
" "	20 " 1 x 6 x 14 W.P. fencing	" " "			
" "	2 " 1 x 12 x 16 Barn Pine #3 Barn	" " "			
" "	1 " 12x14x 25 y. P. Sec. 7ft.	" " "			
" "	24 " 2 x 12 x 16 fir new	" " "			
" "	7 " 4 x 8 x 16 "	" " "			
" "	3 " 4 x 4 x 8 "	" " "			
" "	1 " 6 x 10 x 16 y. P. creo. new	" " "			
" "	2 " 8 x 12 x 16 "	" " "			
" "	2 " 10 x 12 x 10 "	" " "			
" "	1 " 10 x 12 x 12 "	" " "			

Property of
HISTORICAL ASSOCIATION

Port Clinton, Pa., 19549

Material Received Sept. 1933

DATE. 1933	CARGO.		CONSIGNMENT.			INSTRUCTIONS AT
	No. of	CHARACTER OF.	WEIGHT OR QUANTITY	TO WHOM.	NO RETURN	
Sept 29	✓ 5#	8 D wire nails.		Lock #3142 order no 898		Reg. C 15
	✓ 2 pr. 6" 2 nd 7td. strap hinges					
	✓ 1 6" Sec. strap + staples					
Sept 27	✓ 25-3 ⁴ " S q. x 6" chisel pt. Dockspikes	4#		Rec at Pierced car no. 21231 Rdg.	Reg. C 20	
	✓ 114 7/8" x 10"	129#				" "
	✓ 36 7/8" x 12"	48#				" "
	✓ 5" cut spikes	50#				" 19
	✓ 25 3/4" S q. x 12 chisel pt. Dockspikes	38#				" 19
	✓ 57 7/8" x 12	7#				" 19
	✓ 2 7/8" strap hinges	1#				" 19
	✓ 1 Flange latches	1#				" 19
	✓ 40 D wire nails	25#				" 19
	✓ 8 D	6#				" 19
Oct 6	✓ 3 pes. 1x12 + 4 Barn pine			Rec. at Haeng. by freight order #898		" C 15
" 6	✓ 5" " 5 "			" "		" C 15
" 14	✓ 2" 2x10x5 fir			" "		" C 15
" 18	✓ 3" 3x6x4 fir			" "		" C 15
Oct 14	✓ 2-6" Strap Hinges 2 nd 7td.			Rec by baggage Piercerville Order #899 Reg. C 23		
	✓ 1 Flange latches					
	✓ 8 D wire nails	8#				
17	✓ roll reinforced roofed 108 Sq. ft. by freight Piercerville	4#				
17	✓ bag portland cement	"		" "		
OCT. 11	✓ 6 Long handle rd. pt. #2 Shovels SH Recat Old car Shop					Reg. C 18
" 11	✓ 3 rd " #3 Scoop shovels S. Htd. "	"		" "		" C 18
OCT. 11	✓ 2-4# chopping axes Soc. 7td.			Rec. Old car Shop		Reg. C 23
" 11	✓ 2 4# hammers			" "		" "
OCT. 11	✓ 300 ft. 7/8 Dia. Soc. 7td Manila rope 75# Rec Old car Shop					Reg. C 22
" 11	✓ 300 " 3/4 " " " " 40# "			" "		" C 22
" 11	✓ 2 corn brooms	8#		Old car Shop		" C 23
" 11	✓ 300 " 7/8" nuts square			" "		" C 23
" 11	✓ 16 7/8" bolts 19" under Head			" "		" C 20
" 11	✓ 16 7/8" Sq nuts	3#		" "		" C 20
" 11	✓ 16 7/8" cut washers	1/2#		" "		" C 20

Material Rec. Oct. 1933

DATE	QUANTITY	CARGO	CONSIGNMENT			INSTRUCTIONS AT
			No. of	TO WHOM	No. SHIP OR PORT OF	
Oct. 14	✓ 130	9/8 X 14 Dock Spikes	195#	by baggage at Bridgeport		Reg. C 22
" 18	✓ 4 pcs	10 X 12 X 10 fir		by freight "	Rdg # 24509	c 20
" 18	✓ 2 "	10 X 10 X 26 "		" "	" "	c 20
" 18	✓ 3 "	4 X 10 X 18 "		" "	" "	c 20
" 18	✓ 24 "	4 X 12 X 18 "		" "	" "	c 20
" 18	✓ 12 "	10 X 10 X 36 "		" "	" "	c 22
" 18	✓ 12 "	8 X 10 X 18 "		" "	" "	c 22
" 18	✓ 18 "	4 X 8 X 18 "		" "	" "	c 22
" 18	✓ 2 "	6 X 6 X 28 "		by freight	Manayunk	c 22
" 18	✓ 5 "	4 X 8 X 28 "		" "	" "	c 22
" 18	✓ 2 "	4 X 6 X 28 "		" "	" "	c 22
" 18	✓ 40 "	4 X 8 X 18 "		" "	" "	c 22
" 21	✓ 1 "	2 X 6 X 8 "	75#	" "	" "	c 22
" 21	✓ 10 "	2 X 4 X 12 "		" "	" "	c 22
" 21	✓ 7 "	cut Spikes	75#	" "	" "	c 22
" 21	✓ 8 "	- 3/4 X 12 " lag screws		" "	" "	c 22
" 21	✓ 260	3/8 + 2 1/2 "		" "	" "	c 22
" 23	✓ 140 - 1/2" X 10	Dock Spikes	142#	" "	Bridgeport	c 22
" 21	✓ 4 pairs	no 8 3/4 length Rubber boots		" "	Red car Shop	c 23
" 23	✓ 10 pes.	2 X 12 X 16 fir		" "	Bridgeport car no. 6746	c 20
" 23	✓ 3 "	3 X 8 X 8 Oak		" "	" "	c 22
" 23	✓ 3 "	2 X 8 X 8 "		" "	" "	c 22
" 23	✓ 2 "	5 1/2 X 12 1/2 X 31 fir		" "	" "	19
" 23	✓ 1 "	12 X 12 X 12 1/2 "		" "	" "	19
" 23	✓ 1 "	6 X 10 X 16 "		" "	" "	19
" 23	✓ 3 "	2 X 12 X 16 "		" "	" "	19
" 23	✓ 2 "	3 X 9 X 8 Oak		" "	" "	19
" 23	✓ 1 "	2 X 10 X 10 "		" "	" "	19
" 25	✓ 2 "	4 X 8 X 18 fir		Rec from Keeley Lumber yard		Direct order
Oct. 27	✓ 2 pes.	3 X 4 X 16 N.C.Y.P.		by freight - Leesport Order no. 900		Reg. C 23
" "	✓ 7 "	2 X 12 X 16 fir		" " "		" " "
" "	✓ 8 #	400 Durel nails		baggage		" " "
" 28	✓ 200 ft	3/4 Diana rope	31#	at Red car Shop		" " "
Nov. 4	✓ 2 1/2 gals.	cream color paint		by freight - Bridgeport		Reg. C 22
Nov. 6	✓ 1 pc.	10 X 16 X 22 Sec. 2d, creos, fir		by freight car no. 20303 Subaltas		Reg. C 20
	✓ 1 "	23				
	✓ 4 "	10 X 14 X 24				
	✓ 1 "	10 X 16 X 29				
	✓ 2 "	10 X 14 X 24				
	✓ 3 "	10 X 14 X 18				
	✓ 1 "	10 X 12 X 22				
	✓ 4 "	5 1/2 X 8 X 22 new fir				
	✓ 2 "	20				
	✓ 2 "	6 X 8 X 22				
	✓ 1 "	20				
	✓ 1 "	16				
	✓ 3 "	5 1/2 X 8 X 14				
	✓ 52 "	2 X 12 X 16				
Nov. 13	✓ 10 pes.	12 X 12 X 18 Y.P. Sec 2d.		car no. 20338 Rdg. at Birdsboro		Reg. C 14
	✓ 6 "	16 fir				
	✓ 3 "	6 X 12 X 30 W.P.	" "			
	✓ 2 "	12 fir new				
	✓ 2 "	6 X 8 X 9	"			
	✓ 2 "	7 "	"			
	✓ 40 "	4 X 8 X 16	"			
	✓ 6 "	3 X 12 X 16	"			
	✓ 5 "	3 X 10 X 16	"			
	✓ 1 "	5 X 10 X 18	"			
	✓ 1 "	5 X 8 X 14	"			
	✓ 4 "	3 X 10 1/2 X 24 "	"			
	✓ 4 "	20 "	"			
	✓ 1 "	8 X 12 X 5 y.p. creo. Sec 2d	"			

Material received in Nov. 1933

DATE	CARGO		CONSIGNMENT			INSTRUCTIONS AT
	No. of	CHARACTER OF	FROM	TO WHOM	PORT OF	
Nov. 15	✓ 15 Hals.	Kerosene		by baggage at Phoenixville		Reg. C. 25
" 15	✓ 4 R. + R. flat locks			at Old car Slops		" "
" 15	✓ 6 ft 8 D wire nails			at old car Slops for Lock houses		" "
" 21	✓ 1 mine car stove good sec'd			by freight at Bridgeport		" "
" 21	✓ 3 lengths 4 1/2" Dia Stove pipe					" "
" 21	✓ 1 pc. 4 1/2" " elbow			" "		" "
" 21	✓ 1 pc. 1x12 + 16 Sappine			" "		" "
" 21	✓ 1 " 1x12 + 7 "	" "	" "	" "		" "
" 21	✓ 1 Door 2' 2" x 6' 6" x 2 3/8		" "	" "		" "
" 21	✓ 2 pcs. 1x6 x 16 y.p.		" "	" "		" "
" 21	✓ 1 " 1x6 + 8 "		" "	" "		" "
" 21	✓ 1 Roll rubberized roofing freight claim		" "	" "		" "
" 23	✓ 1/2 ton Blacksmith coal from S.L. Shanaman Phoenixville Pa.					" "
" 25	✓ 2 lengths 18" corr. pipes 20 ft long by freight at Bridgeport					" 26
" 28	✓ 1 concreting band for 18" pipes					
" 28	✓ 2 pcs 3 x 8 x 16 for new		by freight at Phoenixville			" 23
✓ 3 " 3x4 x 16 W.C. pine ✓ 50' 1 1/4" T+G, y. P. flooring ✓ 3 pcs 1x10 x 5 W.P. ✓ 2 " 1x20 x 4' 8" W.P. ✓ 23 " 1x6 x 14 W.P. fencing ✓ 7 " " 12 " " ✓ 20 ft 1" lining						
Dec. 1	✓ 6 Hoz. 1/2" Sq. Nuts			at Old car Slops.		Reg. C. 25
	✓ 6 " 7/8" "	" "				
	✓ 6 " 3 1/4" "	" "				
	✓ 6 " 7/8" cast Master					
Nov. 29	✓ 12 wooden Scoop tray wheel barrows			by freight at Phoenixville Pa		
Dec. 7	✓ 6 pick Handles sec'd.		at Old car Slops Rdg. Pa			Reg. C. 25
	✓ 3 small Handles					
	✓ 3 sledge handles					
Dec. 8	✓ 1 Stackmatack Kneel		at Phoenixville P.R.R. Freight			Reg. C. 26
Dec. 12	✓ 6 pcs. 1x6 x 12 W.P. flooring		by freight at Linfield order #09			Reg. C. 25

Material received Dec 1933 ^{and} Jan 1934

DATE	No. of	CARGO	CONSIGNMENT			INSTRUCTIONS AT
			CHARACTER OF.	MOVED BY	TO WHOM.	
Dec. 20	✓ 2 pces. 2 ft. length 5 $\frac{1}{2}$ Dia. Stove pipe at Shop.	sec'd				Reg c 27
	✓ 4 " " 5"	"	"	"	"	" "
	✓ 4 " " 4 $\frac{1}{2}$	"	"	"	"	" "
	✓ 2 " 4 $\frac{1}{2}$ Stove pipe elbows			"	"	" "
1934 Jan 2.	✓ 1 pc. 2 ft. length Stove pipe - 5 $\frac{1}{2}$ one end 2 $\frac{1}{2}$ cir at other end at Shop					Reg. c. 29
Jan 11	✓ 2 corn brooms - at Shop.					Reg c 2
" 11	✓ 5 3 $\frac{1}{4}$ x 2" boiler studs	at Shop				" 2
" 11	✓ 1 1 $\frac{1}{4}$ x 1 $\frac{1}{2}$ Brass nipple for injector line at Shop					" 2
" 11	✓ 1 $\frac{1}{4}$ Service ell. galv.	at Shop				" 2
" 11	✓ 1 $\frac{1}{2}$ Rd. way Stove cock					" "
" 11	✓ 600 3 $\frac{1}{8}$ x 1" flat Head rivets					" 1
" 11	✓ 50 3 $\frac{1}{8}$ x 2" flat Head rivets					" 1
" 11	✓ 36 5 $\frac{1}{8}$ x 1 $\frac{1}{4}$ countersunk rivets					" 1
" 11	✓ 75 3 $\frac{1}{8}$ x 1 $\frac{1}{4}$ bolts					" 1
" 11	✓ 25 3 $\frac{1}{8}$ x 2 $\frac{1}{2}$ bolts					" 1
" 15	✓ 1 pc. 8 x 12 x 6 oak	48' at Phoenix, Reg car # 20590				Reg c 26
	✓ 1 " 7 x 7 x 4 "	16'				
	✓ 1 " 3 x 12 x 16 "	48'				
	✓ 5 " 3 x 12 x 12 "	180'				
	✓ 2 " 3 x 10 x 16 "	80'				
	✓ 1 " 3 x 8 x 16 "	32'				
	✓ 2 " 2 x 12 x 16 "	64'				
	✓ 4 " 2 $\frac{1}{2}$ x 8 x 8 "	53'				
	✓ 12 " 2 $\frac{1}{2}$ x 7 x 16 "	280'				
	✓ 8 " 3 x 12 x 18 "	432'				
	✓ 6 " 3 x 12 x 16 fir	288'				
	✓ 6 " 2 $\frac{1}{2}$ x 10 x 32 "	450'				
	✓ 6 " 2 $\frac{1}{2}$ x 10 x 16 "	200'				
	✓ 24 " 2 $\frac{1}{2}$ x 12 x 9 "	450'				
	✓ 14 " 2 x 12 x 16 "	448"				
Jan. 16	✓ 4 pces. 3 x 12 x 12 "	144' Lock no. 47	Shop truck			Reg c 20
" "	✓ 2 " 2 x 12 x 16 "	64"	" "	" "	" "	" "
" 18	✓ 1# Putty		Lock #43	Order # 911	Shop truck	Reg. c. 27
" 18	✓ 2 Pairs 8" sec'td. strap hinges	"	"	"	"	" "
" 18	✓ 2 ft 8 Dividersails	"	"	"	"	" "
" 18	✓ 3 Rolls Ruberoid Roofing	"	"	"	"	" "

Feb.

Material Rec. in Jan. 1934

DATE.	CARGO.		CONSIGNMENT TO			INSTRUCTIONS AT
	No. of	CHARACTER OF	WEIGHT OR	TO WHOM	order	
Jan 18	✓ 2 pcs. 1 1/2 x 12 x 11' fir	33'	Tock # 43	✓ 91#	Shop truck	Reg. C 27
"	✓ 1 "	2 x 12 x 6 "	12"	" "	" "	" "
"	✓ 1 "	1 x 8 x 6 Barn pine	4'	" "	" "	" "
"	✓ 14 "	1 x 12 x 16 Barn Pine	224	" "	" "	" "
"	✓ 2 "	1 x 12 x 16 B. P. Surfaced	32	" "	" "	" "
"	✓ 1 "	1 x 12 x 10 "	10	" "	" "	" "
"	✓ 1 "	1 x 8 x 8 Barn pine	5'	" "	" "	" "
"	✓ 4 "	1 x 6 x 14 W. P. flooring	28'	" "	" "	" "
"	✓ 1	gal yellow paint		" "	" "	" "
"	✓ 1/2 "	white	"	" "	" "	" "
" 22	✓ 2 tons Pea coal	from Shannahan Phoenix	at Tock # 60			Reg. C 2
" 26	✓ 1 pc. 3 x 2 x 18" angle iron	at Shop				" C 1
" 29	✓ 1 3/4 x 1 1/2" nibble	at Shop				" C 2
" 30	✓ 1 5/8" boiler Stud Tap	at Shop				" C 2
" 30	✓ 1 1/2" boiler Stud Tap	at Shop				" C 2
Feb. 3	✓ 2 3/16 x 36" x 53" Steel Hull Sheets	Tock # 60 by baggage	205#			" C 1
Feb. 9	✓ 6 pcs 1/2 Rd. Iron	28# by freight at Phoenix,				" C 25
Feb. 14	✓ 2 pcs. 3/16 x 36" x 34" Steel Hull Sheets	Tock # 60 by baggage	209#			" C 1
" 16	✓ 1 pc. 5/8 x 1" x 4 Flat iron	at Shop		8#		" C 4
" 16	✓ 2 wheelbarrows iron tray sec. Hd. at Shop					" C 4
" 16	✓ 3 pcs 3/16 x 2 x 20 flat iron	at Shop		75#		" C 4
" 15	✓ 1 pc. 1/2 x 40 x 40 Earl. # 900 steam chest packing	7# at Phoenix Pass,				" C 4
" 15	✓ 30 fibre water bottle washers			at Phoenix Pass		" C 4
" 15	✓ 36 Rubber water bottle washers			at Phoenix Pass		" C 4
" 15	✓ 1 ball ast. est. valve 1" Rg. 1/2"			at Phoenix Pass		" C 4
" 16	✓ 250 3/8 x 1" flat Head Rivets			at Shop Delivered to L. 60 11#		" C 4
" 19	✓ 4 - 1" C. I. washers sec. std.	2 1/2" dia	9#			Reg. C 3
" 19	✓ 4 7/8 C. I. "	" "	4#			" C 3
" 19	✓ 2 3/4" C. I. "	" "	1 1/2"			" C 3
" 19	✓ 2 Rattan Brooms			by freight - Phoenix,		" C 4
" 21	✓ 4 Pcs. 2 x 12 x 16 Oak			by freight Phoenix, car # 25661		" C 4
" 21	✓ 4 Pcs 2 1/2 x 10 x 16 Cypress			" "	" "	" C 4
" 21	✓ 3 " 3 x 10 x 32 fir			" "	" "	" C 6
" 21	✓ 2 " 5 1/2 x 10 x 14 6" fir			" "	" "	" C 5
" 21	✓ 6 " 3 x 12 x 16 fir			" "	" "	" C 3

Material Rec. in Feb. ^{and} March 1934

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Feb. 21	✓ 2 pds.	4x8x16 fir by Freight at Piermont each	25561		Reg. C-5
" 21	✓ 26	1 ¹ / ₄ x 5 ¹ / ₄ - 42-10 ¹ / ₄ x 5 ¹ / ₈ - 36 1 ¹ / ₄ x 5 ¹ / ₂ Boiler tubes for Dredge	"		Reg. C-1
" 21	✓ 2	11 8x12x16 oak	"	"	not in C-26
" 21	✓ 10	1 ¹ / _{2 x 1¹/_{2 separated 8 ft long, 1¹/₂ wide}}	"		Rec. without Register
" 26	✓ 24	pds. 14x8x16 fir by Freight Saratoga Pd. car # 23546			Reg. C 3
" 26	✓ 12	" 3+8+16 "			
" 26	✓ 1	" 3+8+12 "			
" 26	✓ 1	" 3+8+14 "			
" 26	✓ 2	" 6+8+4 "			
" 26	✓ 4	" 3 ¹ / ₂ +8 ¹ / ₂ +38 "			
" 26	✓ 2	" 3 ¹ / ₂ +8 ¹ / ₂ +22 "			
" 26	✓ 1	" 3 ¹ / ₂ +8 ¹ / ₂ +19 "			
" 26	✓ 4	7/8 Rads			
" 26	✓ 2	3/4 x 22 ft. lts			
" 26	✓ 2	1" x 2 1/4 lts			
" 26	✓ 5	7/8 ~ 17 "			
" 26	✓ 5	7/8 nuts	1/8 #		
" 26	✓ 5	7/8 cut washers	3/8 #		
" 26	✓ 2	1 nuts	1 #		
" 26	✓ 8	7/8 "	3 #		
" 26	✓ 2	3/4 "	1/2 #		
" 26	✓ 4	1/2 x 3 1/2 lts. washers	20 #		
" 28	✓	Glasses for water gauge	obtained from no. 1 Reg.		
" 27	✓ 1	barrel of boat pitch	at Belmont by Freight		Reg. C 4
Mar. 5	✓ 1	gal. turpentine oil by freight			Reg. C 4
" 5	✓ 1	Pt. Japan River "	" "		" "
" 9	✓ 2 pds.	1" x 42" x 48" Sheet asbestos by freight			Reg. C 4
" 9	✓ 15	gals. Brown car paint by freight			.. C 4
" 9	✓ 3	" Red lead paint "	" "		.. C 4
" 12	✓ 2	gals. white paint	" "		.. C 4
" 13	✓ 2	Sulphur sheets	Bags 36x36x36 220# Reg. C 1 and .. C 4		
" 13	✓ 3	Dry 2 1/2 ft wood screws			.. C 4
" 16	✓ 1	Barrel 3/8 Syrup 15# by freight			.. C 4
" 16	✓ 1	6 ft. 7/8 manila line 10# w/ hoppers			.. C 4
" 16	✓ 50	Boxed compressed from Henry Powers, Mineral City			
" 19	✓ 1	Keg 1# case with Soda by freight			Reg. C 4
" 19	✓ 1	Ton Bituminous coal and coke from Standard Oil Company			
" 11	✓ 500	1" Tin cans 133# from China			

Material Received in Mar. April May 1934

DATE.	No. of	CARGO.	CONSIGNMENT.			INSTRUCTIONS AT
			CHARACTER OF.	TO WHOM.	PORT OF	
Mar. 22	✓ 135 lbs. steel $\frac{3}{8} \times 36 \times 54$	by bag: go from boat to ship				Reg. C 4
" 30	✓ 15 gals. Kerosene	by freight				" C 6
" 30	✓ 10 lbs. Red engine oil	" "				" C 6
" 30	✓ 10 lbs. Black oil	" "				" C 6
" 30	✓ 5 lbs. Steam cylinder oil	" "				" C 6
" 30	✓ 40 lbs. Tallow	" "				" C 6
" 30	✓ 4 pds. Boiler bags	" Baggage were required				" C 1
" 30	✓ 1 Brass. Steel bearing	Bushing by baggage				" C 1
Mar. 3	✓ 4 safety valves were required Rec'd by baggage & handled by crew					
" 3	✓ 2 Steam Drags	" " " " "				" C 1
4	✓ 2 piston rings for engines	" " " " "	Machinery required	Reg. C 1		
" 6	✓ 18 ft. x 2 ft. Stock $\frac{1}{8} \times 3\frac{1}{2} \times 26'$	" " " " "	" " " " "	" " " " "	" C 1	
" 6	✓ 1 Steam. Bonnet	" " " " "	" " " " "	" " " " "	" C 1	
" 12	✓ 2 P. t. m. R. Rows	" " " " "	No baggage no wages			C 7
" 17	✓ 1 corn broom	" " " " "				C 7
" 17	✓ 3 12-12-12 black Saw-blades	" " " " "				" C 7
" 17	✓ 12-12-12 black Saw-blades	" " " " "				" C 7
" 17	✓ 6 - Sheet. + 2 every cloth	" " " " "				" C 7
" 17	✓ 1 $\frac{3}{4}$ " reamer	" " " " "				" C 7
" 17	✓ 1 $\frac{1}{2}$ " " " " "					" C 7
" 17	✓ 2 wooden tub buckets Sect'd	" " " " "				" C 7
1	✓ 1 $\frac{1}{2}$ " block holding #155-2 nd by main not investigated					
1	✓ 1 $\frac{1}{2}$ " " " " 4 " "					
" 17	✓ 3 Steam drags graphite	" " " " "				
" 17	✓ 7 Boiler mud pipes	" " " " "				
21	✓ 2 Rusting brushes	" " " " "				Reg. C 2
" 26	✓ 153 copper fire fenders 11# left hand					
RE-reqd 1 Steam gauge rotated about 25° and rec'd in one box April 26 th 34						
27	✓ 1 15" x 18" Cast iron pipe 1" thick x 1" diameter. Retained April 29 th 1924					
27	✓ 4" 1" cast iron pipe 1" thick x 1" diameter. Retained April 30 th 1924					
27	✓ 8 6 1/2" x 1 1/4" x 5 1/4 x 5 1/2" L. I. tubes with wedged ends					C 7
27	Welded & forged 12" x 12" x 12" x 12" 12402, 1000 lbs. weight					
27	✓ 1 D. I. lead bucket	" " " " "				
27	✓ Brass thrust bearing	" " " " "				
27	✓ 2 Pds. 1" Steam. 16' long by baggage					Reg. C 7
27	✓ 1 15" x 18" Cast Iron Step bolt 2 1/2" "					

1934

Material Rec'd. in May, June,

DATE.	No. of.	CARGO.	CONSIGNMENT.			INSTRUCTIONS AT
			CHARACTER OF.	TO WHOM.	PORT OF	
" 10		✓ 23 ft. of 4" tube to be cut to get re-adjusted Dredge & Tug ✓ Rec. 2 Safety Pops that were taken off boat ship				
" 15		✓ 57 ft. 12 in. cut. Pea coal at Pleasant cut #71825. Pay.			R. S. C. - 8	
" 15		✓ 1 Roll Redwood Roofing of 10 ft. no handling charges			" C-10	
" 16		✓ 10 ft. 6" Steel Sheet metal by 12 ft.			" "	
" 16		✓ 1 thumbtack "			" "	
" 18		✓ 3 ft. 8 3/4" x 7 1/2" pine by 12 ft. get no handle of charges			" "	
" 18		✓ 2 ft. 2 x 4 ft. "			" "	
" 18		✓ 120 Pcs. 1 x 6 x 16 ft. Pilings "			" "	
" 18		✓ 20 Pcs. 1 x 6 x 12 ft. W.P. flooring "			" "	
" 18		✓ 10 ft. 1 x 6 x 12 ft. " "			" "	
" 25		✓ 1 Grass Scythe already Received not for Reg. Period			R. S. C. 11	
" 27		✓ 1 Grass Scythe for company use			" "	
		✓ 2-1/2" x 4" Sub-siding trim wood by 12 ft.			" C 10	
" 7		✓ 1 Grass Scythe already received not for Reg. Period			" "	
" 7		✓ 2 ft. 1 x 6 x 12 W.P. flooring			R. S. C. 10	
" 15		✓ 110 ft. 3 1/2" Diamond pine by baggage not handling charges			R. S. C. 11	
" 18		✓ 5 mds. Black Oil by 4 ft. mds.			" C 11	
" 18		✓ 1 pc. 2 x 10 x 3' 6" fir Surf. by F. L. McNamee order 1700			" "	
" 18		✓ 2" x 12 x 12 W.P. flooring	" "		" "	
" 18		✓ 9" x 2 x 12 x 16 fir	" "		" "	
" 18		✓ 2" x 2 x 10 x 16 fir surf.	" "		" "	
" 18		✓ 1/2# 8D wire nails by baggage	" "		" C 10	
" 18		✓ 4# 20D wire nails "	" "		" "	
		✓ 10 mds. 4x6 pine gravel Rags			W.H. 10	
" 18		✓ 12 bags Portland cement from Smart L. Co. up			" "	
" 18		✓ 5 bags Portland cement from Smart L. Co. up			" "	
May 28		I had 13 hand chisels and two cutters dressed at Loco Shop				
June 14		I had 10 hand chisels dressed at Loco Shop				
July 2		I had 12 hand chisels and two cutters dressed at Loco Shop				
June 9		Rec'd. tested Pop from Loco Shop for dredge.				
June 15		Rec'd. tested pop from Loco Shop for tug				
June 26		R. D. Bertram 1162 Green St., Rag. Pa. Tested the Pops on D Dredge and Tug and condemned them.				
July 30		Rec'd. Pump Scow pop and took it on the Dredge Aug. 1st. 1934				

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Material Received in July,

1934.

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
July 9	✓ 2	Corn Brooms, by mess.	Mechanic & crew		Reg. # 12
" 13	✓ 5	Gals Red engine oil by ..	Bug and Dredge		" 12
" 13	✓ ½	Gal. Black boiler paint by mess.	Bug		" 12
" 13	✓ 10	lbs. cotton waste by mess.	Bug + Dredge		" 12
" 17	✓ 1	3 gal. yellow paint by bag, for Lockhouse order # 915			" 11
" 17	✓ 1	½ " Lead color paint "	" 5 "		" 11
" 17	✓ 3	pcs. 3x8x16 ft. pine	Samuel) Slipped emergency order not written		
" 17	✓ 5	# Rusted roofing nails by mess			Reg. C. 12
" 17	✓ 5	# Pickers' Cement	" "		" 12
" 20	✓ 1	Gal. Lead color paint by mess, for Lockhouse # 83			" 12
" 20	✓ 2	gals white Paint by mess, for Lockhouse # 59			" 12
" 24	✓ 6	pcs. 7/8x10" Dock spikes 7# for Lockhouse # 51 order # 918			" 13
" 24	✓ 8	D. wire nails 10# "	" " "	" "	" 13
" 24	✓ 20	D. wire nails 5# "	" " "	" "	" 13
" 25	✓ 1	pc. 12x12x36 y. P. Sec) td. Rec. at Conshohocken Rdg. Car # 20187			Reg. C. 12
" 25	✓ 5	pcs. 6x12 1/2x18 fir	" " "	" " "	" "
" 25	✓ 10	" 4x8x16 "	" " "	" " "	" "
" 25	✓ 2	" 3x6x16 "	" " "	" " "	" "
" 25	✓ 39	" 2x12x16 "	" " "	" " "	" "
" 25	✓ 50	" 2x12x16 " jointed	" " "	" " "	" "
" 25	✓ 40	" 2x12x14 "	" " "	" " "	" "
" 25	✓ 10	" 1x12x16 - 1/8 Barn piece	" " "	" " "	" "
" 25	✓ 2	" 4x12x8" Oak	" " "	" " "	" "
" 25	✓ 5	" 3x12x5.7" " Surfaced	" " "	" " "	" "
" 25	✓ 5	" 3x12x4.6" "	" " "	" " "	" "
" 25	✓ 2	" 3x10x14 "	" " "	" " "	" "
" 25	✓ 3	Kegs 400 wire nails 300#	" " "	" " "	" "
" 25	✓ 1/2	" 200 wire nails 50# "	" " "	" " "	" "
" 31	✓ 2	pcs. 4x8x16 fir	Slipped to Birdsboro by Freight Order # 918		13
" 31	✓ 3	" 3x6x16 "	" " "	" " "	13
" 31	✓ 15	" 7/8x4x14 W.P. flooring	" " "	" " "	13
" 31	✓ 1	" 1x12x6" #3 barn piece	" " "	" " "	" "
"	✓ 1	bevel gear # 561			13
"	✓ 1	" pinion "			13

Material Received in August and September

1934

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Aug. 4	✓ 1	Sec. Hd. Grass Scythe	Lock no 69-70 by mess.		In action Reg.
" 4	✓ 1	Sec. Hd. Pitch Fork	" " "	" "	Reg. c-17
" 7	✓ 10# US. Army Oakum	From Philada. Store Port Richmond	Section Scow Lock #68 "	" "	" "
" 9	✓ 6	Sand hammer handles by mess for Mc. Scow supplies			Reg. c-14
" 11	✓ 1	3 C. Hd. grass The	" at 4.5 mi level		Reg. c-17 G. F. M. K. C.
" 13		John Whelan fitted the poles on Dredge & dredged around them			
" 20	✓ 2 Gals. Ruberine Paint	by mess	Lock house #30		Reg. c-14
" 20	✓ 3 gals. Ruberine Paint	"	" House #83		" 14
" 22	✓ 5 gals. Ruberine Paint	by Freight	Lock house #60		" 14
" 31	✓ 110 ft. 5/8" Rope 18#	by mess	for Lock no 69-70	not on	Requisition
" 31	✓ 1 Sec. Hd. Grass Snaith		for Standing level	not on	Requisition
Sept. 8	✓ 3	Wooden Water Buckets, by mess, for Dredge use			Reg. c-18
" 8	✓ 3 Pcs. 10x12x16 fir	by comruck, for Bridge no. 65			Reg. c-15
" 10	✓ 6" cut spikes 2#	by mess.	Bdg. nos. 68-64-65	"	" "
" 10	✓ 7" cut spikes 8#	" "	" " " " "	"	" "
" 10	✓ 2 pes. 10x12x14 fir	by Freight Box car #593113 CM. ST P+P Milwaukee, 34qt #6			" "
" "	✓ 14 "	8x12x24 "	at Rutherford Station	" 6	" "
" 10	✓ 2 pes. 10x12x16 fir	Box car no. 2282 Rdg. Bdg. 8 1/4 mile level at Birdsboro Art. Station			16
" 10	✓ 10 "	10x12x8 fir		Bdg. # 42-44-439	
" 10	✓ 1 "	8x12x5 fir		Bridge # 46	
" 10	✓ 1 "	8x8x12 fir		Bridge # 48	
" 10	✓ 2 "	8x8x14 fir		Bridge # 49	
" 10	✓ 1 "	6x12x12 fir		Bridge # 49-44	
" 10	✓ 4 "	6x10x18 "		Bridge # 46	
" 10	✓ 4 "	" 5 "		" "	
" 10	✓ 2 "	6x8x18 "		Bridge # 29	
" 10	✓ 8 "	6x8x18 "		Bridge # 81	
" 10	✓ 20 "	3x12x18 "		Bridge # 50	
" 10	✓ 8 "	Dog 5/8" nuts Sg. nuts by mess.	Mechanic Scow Supplies		Reg. c-18
" 10	✓ 8	Dog 1/2" Sg. nuts	" " "	" "	" "
" 10	✓ 1/2" cut washers. 3#	" "	" " "	" "	" "
" 13	✓ 7 pes. 3x12x16 Oak	Rdg. car 28508 at Birdsboro Art. Station Bdg. 678	from Store House	mile levels	Reg. c-16
	✓ 56 pes 3x10x16 "				
	✓ 19 "	3x8x16 "			
	✓ 31 "	3x7x16 "			
	✓ 16 "	3x10x14 "			
	✓ 10 "	3x7x14 "			

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Material Received in September and October

1934

DATE	No. of	CARGO.	CONSIGNMENT.		INSTRUCTIONS AT
			CHARACTER OF.	TO WHOM.	
Sept. 13	✓ 2 pcs. 3 x 12 x 12 Oak	from Store House at Birdsfors On car	Rdg # 28608 Reg. C-16 for Pages. Six and 8 Mile level		
	✓ 48 " 3 x 10 x 12 "				
	✓ 51 " 3 x 7 x 12 "				
	✓ 2 " 4 x 12 x 12 "				
	✓ 13 " 3 x 8 1/2 x 20 fir				
	✓ 1 " 3 x 8 1/2 x 16 "				
	✓ 4 " 3 x 6 x 16 - "				
	✓ 4 " 2 x 4 x 16 Sapsine				
	✓ 2 Kegs 7" wire Spikes 200#				
	✓ 2 Kegs 600 " Nails 200#				
	✓ 400 wire nails 5#				
	✓ 24 pcs. 1/2" x 12" Dock Spikes				
	✓ 1 Bbl. Kerosene from Store House on car				Reg. C-18
	✓ 14 Empty Oil Drums Sec'td. from Store House on car				" "
	✓ 28 pcs 2 x 12 x 16 fir		" " " "		" "
	✓ 2 pcs 6 x 9 x 42 fir		" " " "		" "
Sept. 24	✓ 1 Hand Hatchet	from Store House by mess	for Bridge use		Reg. C-18
	✓ 2# tin ^{robb} nails		for Lock House #43	not on Reg.	
	✓ 2# 10 Dvire nails				
	✓ 20# 6" cut Spikes by tractor at Car Slip. for Bridge #52				Reg. C-18
	✓ 20# 7" "				" "
	✓ 2 Pad Locks Sec'td. " mess.		for Feeder House lock #58	Reg. C-12	
	✓ 160 9/8" x 10" Dock Spikes 190#, by freight at Gibraltar from Rought iron Co Lebanon				Reg. C-18
	✓ 50# 6" cut Spikes		for Big Reading Dam, Foster Slope Sluicing		
		from Store House at Car Slip for Bridge #6			Reg. C-13
	✓ 15# 7"				Reg. C-15
	✓ 10# 200 wire nails				Reg. C-15
	✓ 6 3/4" x 16" Dock Spikes		for Big Reg. Dam	" C-18	
	✓ 1 6" Hatch	from Store House	for Lock #43		not on Reg.
	✓ 1 Pad Lock Sec'td.	" "	" "	" "	" "
	✓ 8 7/8" #10 Flat Head wood Screws	" "	" "	" "	" "
	✓ 26 car of Egg coal	for Feeder House lock #68 and Lock House #72			Reg. C-19
Oct. 2	1 car " Pea coal	" dredge & Aug.			" C-19
	✓ 2 Pcs. 4 x 12 x 16 fir	from Store House to Rosensford	Rdg. no. 21939		Reg. C-10
	✓ 2 " 4 1/2 x 6 1/2 x 8 fir	" "	" "		" "
	✓ 4 " 4 x 5 1/2 x 16 Y.P.	" "	" "		" "
	✓ 16 " 8 x 13 1/2 x 36 fir	" "	" "		" "
	✓ 6 " 2 x 6 x 16 "	" "	" "		" "
	✓ 12 " 2 x 4 x 16 Y.C. pine	" "	" "		" "

Material Received in October and November

1934

DATE.	No. of.	CARGO.	CONSIGNMENT.		INSTRUCTIONS AT
			CHARACTER OF.	TO WHOM.	
Oct 9	✓	4 corn Boxes, from Store house by mess.	for Dredge	Dredge	Reg. # C-20
" 10	✓	1 pc. 8x10x24 y. P. Sec. 7hd. from car shop on car Rdg. #29096, Big Rdg D.	"	"	# 618
" "	✓	26 " 4x8x16 fir			
" "	✓	11 " " 10 "			
" "	✓	15 " " 6 "			
" 11	✓	1 Gal, Screw cutting oil, from store house for M.C. Scov			Reg. # C. 20
" 15	✓	2 Bags Portland Cement, from store house by H.H. at Haug. for Lock house # 30			" # C. 20
" 18	✓	10 pcs. 3x10x20 fir, from store, hauled by store truck to Dredge # 52			" # C-15
" 23	✓	10# cotton waste, from store house, by mess, for Dredge and Dug			Reg. C-21
" 23	✓	5 Gals. Steamer engine oil "	crosby Steam gage & valve co., 10 Poland St Boston, Mass.		" "
Nov. 5	✓	2 Safety valves, from store , for Dredge and Dolphin liners,	(2- 2" Br. T.O. Pop. valve 100# style H.H-111, \$9.77 each,		Reg. C-20
Nov. 5	✓	4# 20D wire nails, from store house, for Lock house # 50, order # 922,			Reg. C-22
" 6	✓	12# 8D wire nails, "	" "		" "
" 5	✓	3 lbs. 1 1/2 #10 wood screws, "	" "		" "
" 5	✓	2 pr. exp. 24g. 8" strap hinges "	" "		" "
" 8	✓	1 Bag cement, from store house	" "		" "
" 8	✓	300# Building Sand	" "		" "
" 9	✓	75 ft. 3/4" Dia. wire cable, sec. 7hd.	" for Dredge Backing cable		Reg. - C 23
" 12	✓	2# 10 Dure nails, from store house, Lock house # 38, order # 921			Reg. C-21
" 12	✓	6# 20	" "		" "
" 12	✓	2# 8 "	" "		" "
" 13	✓	2 pco. 4x8x16 fir from store house, for Lock house # 38, order # 921			" C-21
" 13	✓	1 " 4x4x16 "	" "		" "
" 13	✓	50 ft. B.M 1 1/4 y. P. flooring	" "		" "
" 13	✓	1 pc. 1x12x16 73 Barn pine "	" "		" "
" 13	✓	1 " 2x12x16 fir	" "		" "
" 13	✓	2 " " 12 "	" "		" "
" 13	✓	5 " 2x10x16 "	" "		" "
" 13	✓	4 " 2x4x16 N.C. pine	" "		" "
" 12	✓	1 4" wall paint brush	" for lock house # 50, order # 923		Reg. C-22
" 12	✓	5# Pickers cement	" "		" "
" 12	✓	6 Gals. Roofing Paint Rdy. mixed Putty	" "		" "
" 15	✓	2 Gals. Lead color paint from store house, for Porch, Lock house # 30			Reg. C-23
" 17	✓	4 1/4" Hand Basted files, from store house, for M.C. Scov,			Reg. C-18
" 17	✓	1 Gal. Lead color Paint,	" Lock House # 38, order # 921		C-22
" 17	✓	1 Gal. "	" Lock " # 50 "	922	" C-22

Material received in November, (noting Reed, December) January, 1934
 February, 1935.

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT.		INSTRUCTIONS AT
			TO WHOM.	PORT OF	
Nov. 16	✓ 3 pcs. 1x8x16 #3 Barn pine, from Store House, Tock House #60, Reg. C-22				Reg. C-22
" 16	✓ 1 " 1x6x16 "	" "	" "	" "	"
" 16	✓ 1 " 1x3x16 "	" "	" "	" "	"
" 16	✓ 22 " 1x12x16 "	" "	" "	" "	"
" 16	✓ 10 " 1x6x14 w.c. flooring	" "	" "	" "	"
" 16	✓ 8 " 1x6x14 " fencing	" "	" "	" "	"
" 16	✓ 1 " 4x10x16 fir	" "	" "	" "	"
" 16	✓ 1 " 4x10x8 "	" "	" "	" "	"
" 16	✓ 1 " 4x4x12 "	" "	" "	" "	"
" 16	✓ 1 " 3x6x10 "	" "	" "	" "	"
" 16	✓ 3 " 2x8 ¹ x16.	" "	" "	" "	"
" 16	✓ 2 " 2x12x9 Y.P.	" "	" "	" "	"
" 16	✓ 4 Rolls Ruberoid roofing from McFarland	" "	" "	" "	"
" 19	✓ 2# tinker's cement from Store House for Tock House #30				C-23
" 20	✓ 2 com. Brooms, from Store House, for Mechanic S'cov.				Reg. C-24
" 22	✓ 1 gal. Brown car Paint, from Store House, for Feeder float, Lock #68				Reg. C-23
" 28	✓ 1 pc 6 ¹ / ₂ " x 18" Long Galv'd iron Store Pipe, from Store House, for MC S'cov				C-24
" 28	✓ 1 " 6 ¹ / ₂ " x 24" Long Galv'd iron Store pipe ^{complete with stand}				"
Dec. 2	✓ 6 Long Handle Rd. point Shovels Sec. 1st, from Store House, Cleaning cases Reg. C-25				
" 8	✓ 2 5408 Pruning Shears, from Supply-Biddle Hardware Co. Philada. Pa.				C-25
" 10	✓ 22 Lineal ft. 3 ¹ / ₈ chain, from Store House for Dug D'phine				C-28
" 12	✓ 2 bbls. Boat Pitch from Philada. by Freight				" C-28
" 15	✓ 3 gal cans of Ruberized Roof Coating, from Ruberoid Co. New York, for M.S.R.				C-28
" 17	✓ 38 Sec. 1st. 1/2" chain 90# from Toco Shp. by bag. for Damp S'covs				Reg. to Roll.
" 19	✓ 1 Ball torch Wick yarn 2oz from Store House by Mess. for Dredge				Reg. C-24
" 22	✓ 2 bales, Marine Oakum, ^{by Freight} from Marine Manuf. & Supply Co. New York				C-28
" 22	✓ 2# white Putty, from Store House		Dug D'phine		C-28
" 23	✓ 2 Kgs 7" Cut Spikes, from Store House by Freight for Bridge #67				" C-26
	✓ 18 lbs. 8" wire "		" "		"
	✓ 7 " 8" cut "		" "		"
Dec. 5	✓ 3 Handles for Spiking maul, from Store House, Mechanic Force				" C-1
"	✓ 1 Sec. 1st. Lg. Handle for Scop Shovel, from Store House Dredge use				" C-1
" 6	✓ 8 Gds. Brown Car Paint, from Store House, by bag. Floating equipments				Reg. C-28
" 11	✓ 70 lbs. 6" cut Spikes, from Store House by Art.		" "		" 28
" 11	✓ 85 " 5" "	" "	" "		" "

Material Received in February

1935

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Feb. 11	✓ 2	gals. yellow paint, from Storehouse, by Art. for Pug			Reg. C-28
" 11	✓ 3 "	Lead color paint	" " "	" "	" 28
" 11	✓ 1/2 "	Black paint	" " "	" "	" "
" 11	✓ 1 Qt.	Pisan Red paint	" " "	" "	" "
" 11	✓ 1 pc.	6x12x12 Oak from Storehouse by Art. P+R 28521	Section Scow, dock #60	"	27
"	✓ 1 "	6 1/2x8 1/2x10 ..	Mechanic's Scow		
	✓ 3 "	4x8x16 ..	Timber Scow		
	✓ 2 "	4x5 1/2x16 ..	Dumpf .. 1926		
	✓ 6 "	3x12x8 ..	Timber ..		
	✓ 1 "	3x12x8 ..	Mechanic ..		
	✓ 5 "	3x12x8 ..	Deck Scow #14		
	✓ 4 "	3x6x3 ..	Section Scow, L.H. 68		
	✓ 3 "	2x12x8 ..	Deck Scow #14		
	✓ 3 "	2x10x8 ..	Mechanic Scow		
	✓ 3 "	2x5x16 ..	Deck Scow #14		
	✓ 12 "	3x12x16 fir	Dumpf Scow 1926		
	✓ 2 "	3x8x36 ..	" " "		
	✓ 2 "	" 16 ..	" " "		
	✓ 16 "	2x12x16 ..	Timber Scow		
	✓ 6 "	2x12x24 ..	" .. "		
	✓ 18 "	2x12x16 ..	Deck Scow #14		
	✓ 10 "	2x12x16 ..	" .. 15		
	✓ 2 "	2x10x16 ..	Section Scow #60		
	✓ 1 "	1x12x16 Barn pine	Dredge Small boat		
	✓ 1 "	8x12x19 Oak	Timber Scow		
	✓ 1 "	8 3/4x13x9'6" .. Oak	Mechanic Scow		
	✓ 1 "	8 3/4x13x9'6" ..	Deck Scow #14		
	✓ 1 "	8x8x7 ..	3'6" Timber Scow 3'6" Mechanic Scow		
	✓ 1 "	6x8x2 ..	Timber Scow		
	✓ 1 "	5x10x8 ..	Dumpf Scow 1926		
Feb. 18	✓ 4#	200 wire nails from Storehouse, by Mess., for P.E. Order #924, dock #38			Reg. C-1
" 21	✓ 4# 3 oz. 37/8" #150 Garlock packing from Storehouse Dredge & Pug.			"	C-2
" 23	✓ 2100# Bituminous Coal, From S.L. Shanahan Phoenix, Grill Ave			"	C-2
" 25	✓ 2-10" Great American Saw files from Storehouse, Dredge & Pug			"	C-2
" 25	✓ 2-10" Mill Saw files from Storehouse,			"	C-2

1935

Material Received, in February, March and April

1935

DATE.	CARGO.		CONSIGNMENT. TO WHOM Shipped by Leckert, Lesport, Pa.	PORT OF Leckert, Lesport, Pa.	INSTRUCTIONS AT
	No. of.	CHARACTER OF.			
Feb. 20	✓ 3 pcs. 2x10x16 fir, from Storehouse by Fort, for dock house #38, R.E.O.H. 924				Reg. C-1
	✓ 1 " 2x12x16 "	" "	" "	" "	" "
	✓ 1 " 2x4x16 2. Pine	" "	" "	" "	C-1
Mar. 2	✓ 1 gal. Lead color Paint, from Storehouse by mess, for dock N.H. 38 Lesport R.E.O.H. 924				" C-1
" 11	✓ 2 pcs. 6 1/4" x 12 1/2" x 5' 6" Oak, by Fort, from Storehouse for dredge				Reg. C-27
note - Mar. 16 took back to Storehouse ^{was Rec'd 3/18/35} N.H. 38 #367. of 5 1/8" #150 Garlock packing Exchanged it for 1/2 #150 Garlock packing ^{and Rec'd.} 5# 1/2" packing.					
Mar. 2nd	WERE Rec'd. at lumber yard Rdg. for Bridge #67 But were instructed to hold them till advised to ship them, 5 pcs 3x8x18 Oak 180' } was turned over to the lumber yard 21 " 3x10x18 " 945' } July 1935, 10 " 3x12x18 " 540' }				
Memo. 3/6/35. took 2 spud lock Box Bands to Loco Shop to get angles welded.					
" 3/9/35 Rec'd. " " " " from .. they were welded at angles.					
Reported this on March Rec'd. report,					
April 4	✓ 4 Sheets #2 emery cloth, from Storehouse for Dredge and Rdg.				Reg. C-3
" 4	✓ 1 Doz. 1# cans caustic Soda "	" "	" "	" "	" "
" 5	✓ 3 Corn brooms, from Storehouse, 2 for Dredge 1 for Rdg				" "
" 8	✓ 400 ft. 1" dia. Manila line ^{95#} from Store Floating Equipment Supplies				" "
" 8	✓ 300 " 3/4 " " 55#.	" "	" "	" "	" "
" 8	✓ 300 " 1/2 " " 23#.	" "	" "	" "	" "
" 12	✓ 15 Gal. Kerosene from Storehouse for Dredge and Rdg ✓ 1 Steel Kerosene Barrel #757 Note Return to Storehouse April 19th 1935				Reg. C-3
" 8	✓ 8 Gas Steam cylinder oil from Storehouse	" "	" "	" "	" "
✓ 8 "	Engine "	" "	" "	" "	" "
✓ 10 "	Black Oil	" "	" "	" "	" "
✓ 20# Bacon		" "	" "	" "	" "
✓ 20# Cotton Waste		" "	" "	" "	" "
✓ 50# (1# ^{lbs.} caes Boiler) compound	Harris Boyer Chemical Co., Gray Ferry Rd. & 29th St. Philada, Pa.				" "
✓ 1 bbl. Boat Pitch, from Dunlap, Mellor & Co. Philada, Pa.					" "
Apr. 13	✓ 1 bale (50#) Oakum from the marine manufg. & supply co. ²²⁸⁷²³⁸ Amherst, New York				" "
April 22	✓ 2 Dusting brushes, from G.S.H. by mess, for mechanic's cord				Reg. C-5
" 22	✓ 1 corn Broom "	" "	" Feeder House Dock #68	" "	" "
" 22	✓ 1 Garden Rake "	" "	" "	" "	" "
" 22	✓ 1 gal Lead color Paint, from G.S.H. " Dredge and Rdg				C-4
" 24	✓ 10# (Pumper) Cement, from G.S.H.		Dock House #68	" "	C-5
" 24	✓ 7 lbs. 1/8" Sq. Nuts "	" "	Dock Estates	" "	C-5
" 25	✓ 125# 40 Drive Nails, from G.S.H. by baggage for dock estates ^{36#} 62+66				C-4
" 29	✓ 8 pcs. 1/2" x 6" x 4' 6" Flat iron sec. std. from Storehouse by Fort for dock houses 62+66				C-4

Material Recd, April, May,

1985

1935

Material Received in June, ^{and} July

1935

DATE	No. of	CARGO.	CONSIGNMENT		INSTRUCTIONS AT
			CHARACTER OF	TO WHOM	
June 30,					
4 ✓	1	Roll 1" wide, Bauer & Black adhesive Plaster from G.S.H. by Mees for Dredge			Reg. C-7
4 ✓	1	2" wide 104ds " Gauze Bandage "			
" 19 ✓	1	Pc. white Oilcloth 50" x 78" from Strawbridge & Clothier Philada, Pa for M.C. crew			Reg. C-5
May 31, ✓	2	Pcs. 3" x 10" x 12' Oak, 60' from G.S.H. by Art. m/cav # 27594, Rdg. for Lock # 61,			C-5
July 1 ✓	1	1 Roll 1" wide 10 yds, ^{adhesive tape} Bauer & White 10 yds. for M.C. sand force			Reg. C-8
" ✓	1	2" wide - 104ds " 104ds. "	" "	" "	" "
" ✓	1	Cast iron hoisting clutch ^{25#} made at Rdg. Shops, for Dredge.			Reg. C-7
" 5 ✓	1	cast iron backing clutch 25# " " "	" "	" "	" "
" 1 ✓	3	Pcs. 6" x 12 1/2" x 5 1/2" fir 103' ^{for S.E. 7th St., for Bridge}			Reg. C-8
✓ 1 "	6" x 12 1/2" x 12' " 95' .				29
✓ 1 "	6" x 8" x 4' " 16' .			Bridge	
✓ 1 "	3 1/2" x 8 1/2" x 6' " 15' .			Bridge	
✓ 2 "	8" x 16" x 5' " 107' .			" "	" "
✓ 6 "	5 1/2" x 8" x 5 1/2" Sec. H.D. rated 121 ft				
✓ 1 "	4 1/2" x 8 1/2" x 8' " Fir, " 26' .			" "	49
✓ 2 "	4" x 10" x 14' Fir Sec. H.D. 93' .			" "	37
✓ 6 "	" 18' " " " 360' .			" "	41
✓ 2 "	10" x 10" x 15' " " " 250' .			" "	22
✓ 3 "	5 1/2" x 12 1/2" x 30' Y.P. " " " 519' .			" "	520
✓ 1 "	3" x 7" x 8' " " " 14' .			" "	43
✓ 1 "	7" x 9" x 13' " " " 68' .			" "	61
✓ 1 "	4" x 10" x 13' " " " 43' .			" "	49
✓ 1 "	6" x 8" x 17' " " " 68' .			" "	
✓ 1 "	12" x 12" x 15' " " " 180' .			" "	
✓ 1 "	12" x 16" x 24' " " " 384' .			" "	
July 8 ✓	1	3/8" Brace bit 19" Long, from Storehouse suspending timber			Reg. C-7
" 11 ✓	1	bottle, ^{Camphor creosote} tinner, from Shoemaker & Bush due, 516 Arch St. Philada			Reg. C-7
" 11 ✓	1	Pc. Galv'd. iron stove pipe, 8" Dia. x 24" long sec. H.D. from G.S.H. for Lock # 68			For Dredge crew Reg. C-7
" 11 ✓	1	Pc. " " " 8" Dia. 24" long complete with stove top " " "			" "
" 30 ✓	1	pc. sole leather 12" x 36" ^{5#} from G.S.H. Pump repairs floating equipment Pumps			Reg. C-9

Material Received in August, September, ^{and} October,

1935,

DATE.	No. of.	CHARACTER OF.	CONSIGNMENT.			INSTRUCTIONS AT
			TO WHOM.	PORT OF		
August 5	✓ 2 corn brooms, by mess, from G.S.H. for Feeder house lock #68, 320.					Reg. C-10
6	✓ 10 pcs. 3x8x16 ft. P. forced lbr. 34. Rag, by G.S.H. Bruck, bams acq.					Rec. C-11
"	✓ 16 pcs. 2x12x16 fir 512"	" " "	" " "	" " "	" " "	" "
" 9	✓ 7" 3x12x16 " 336 "	" " "	" " "	" " "	" " "	" "
" 9	✓ 3 pc. 10x12x7' Sec. of lbr. 4.P. 210"	" " "	" " "	" " "	" " "	" "
" 9	✓ 30 pcs. 3x8x16 4. P. 960"	" " "	" " "	" " "	" " "	" "
Aug. 6	✓ 1/2 Keg 60 Dvine Nails 50#	G.S.H.	by	" " "	" " "	" "
" 6	✓ 1/2 " 40 "	50#	"	" " "	" " "	" "
" 6	✓ 10 pcs. 1/2" Sq. x 16" Dock Spikes	"	" " "	" " "	" " "	" "
" 20	✓ 5 gals. Steam Engine Oil, from G.S.H. charge to Dredging Phoenix & Philade	"	C-12			
" 20	✓ 1 corn Broom, from G.S.H. 18 ³ / ₈ " Rag,	"	" "			" "
" 20	✓ 12 Oil Drums, 52 ¹ / ₂ Hds. "	Rd. f. Float Lock #68	"	C-10		
" 20	✓ 1 Hl. Kerosene 50 gal., ^{Amt. of} Cans	Feeder house lock #68	"	" "		" "
" 20	✓ 1/2" Std. barrel #770, ^{by} Returned to Store house Aug 20 th 1935,	"				
" 20	✓ 5 gals. black oil front G.S.H.	Feeder house lock #68.		Reg. C-10,		
" 20	✓ 6 pcs. fir 4x6x16, 128' from lbr. 4d. channel buoys, ^{Hammont} _{Springwell} Reg. C-9,	valves				
" 20	✓ 1 " 6x9x42', 189'	Float lock #68		Reg. C-10,		
" 20	✓ 4 " 2x12" x16, 128'	" " "	" " "	" "	" "	" "
" 20	✓ 2 " 3x12x16, 96 ⁴ / ₈ "	" " "	" " "	" "	" "	" "
" 20	✓ 4 " 4 ¹ / ₂ x5x16 53"	" " "	" " "	" "	" "	" "
" 20	✓ 1 pc. Oak 3x12x16 48"	" " "	" " "	" "	" "	" "
" 20	✓ 33 pcs. 2x12x16 fir 1056 "	Flash boards Flat Rock Head	" "			
" 20	✓ 4 pcs 6x9x18 " 324 "	Lock profs. Lock #69 & 70,	" "			
" 20	✓ 2 gals. corn broom can paint, G.S.H.	Float lock #68	" "			
" 29	✓ 150' 3/4" Dia. manila line, 25# from G.S.H. by mess. for lock #68,			Reg. C-10		

Sept. 4, ✓ 3 Sec) (1d.) Heavy Pad locks from storehouse, for lock #67.

Peg. C-7.

11 21 2 5408 Pruning Shears, from Suppled-Biddle Hardware Co., Philadelphia Pa, Reg. No. 3-15- C-13.
charge 1 to Vincent Canal, 1 to Terrell & Company Canal.

11 25 2 Corn Booms, from G.S.D., for Dredge use Reg. C-14

" 26 V 15# Falcon, from G.S.H. charge to Cook Repairs

" 26 1/4 Gal. Screw cutters, all front gear, S. It. charge repairs to stock

" 26 ✓ 1st cal Black w. from G.S. 24.

" 24 ✓ grass scythe Sec. 1d. from G.S.M. by ^{new} charge to Five Mile Canal Reg. C 16
the 3rd 18 1st

15 24 Chrysanthemum 10 10 10 10 10 10 10 10 10 10 10 10 10 10

Material received in October, November,

1935,

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of	CHARACTER OF	TO WHOM.	PORT OF	
Oct. 1	✓ 1 Gal.	White paint, from G.S.H., by mess, charge to buoys Red Rock & Parmonout	Docks	Reg. C 14	
" 1	✓ 10 lbs (tinkers) cement, " "	" to Lock House # 33	" "	" "	
" 8	✓ 1 car Furnace coal	charge to feeder house Lock # 68 & Lock House # 72	" "	" "	
" 8	✓ 1/2 Doz. 12" Stack Saw blades, from G.S.H., by mess, charge to Line repairs	" "	" "	" "	
" 14	✓ 1 car anthracite Pea Coal	charge to Dredge, Dredge	" "	" "	
" 17	✓ 2 Rolls Rubberoid Roofing, from G.S.H. by Art., charge to Tool & Coal Shed Lock # 66	Reg. C 15			
" 17	✓ 3 pes. 3" x 4" x 16' N.C pine, 48"	" "	" "	" "	
" 17	✓ 25 pes. 1" x 12" x 16" Y.P. 400"	" "	" "	" "	
" 17	✓ 5 Gals. Brown car paint	" " charge to Roof, Lock # 68.	Reg. C 14		
" 24	✓ 1 Grass Scythe, Sec, Hd. from G.S.H., charge to Five Mile Level	Reg. C 16			
" 24	✓ 1 Snaith	" " "	" "	" "	
" 23	✓ 10# 10D wire nails, " Order No. 13-490 Lock # 56	" "	" "	" "	
" 23	✓ 4# 8D " " " " " "	" "	" "	" "	
" 30	✓ 1 Pce. 4x4x6 fir 8' " "	" "	" "	" "	
" 30	✓ 66' B.M. 1 1/4" flooring T & G. " 7' long, by Art. " "	by Art. " "	" "	" "	
" 30	✓ 1 pce. 1x10x16 B.M. pine 13' " "	" "	" "	" "	
" 29	✓ 1 front brick rest for O'Phello # 327 Brangle, from Reading Stone works, Weight baggage charge to Dredge,	Reg. C 8			
" 36	✓ 1/2 Keg 10D Wire nails from G.S.H. by Art., Repairs Lock Houses 60 to 72	Reg. C 16			
" 30	✓ 1/2 " 8D " " Baggage, " "	" "	" "	" "	
" 28	✓ 2 Bundles 5/8" Scraps Rd. wood scrap 54" " to Locks "	" "	" "	" "	
Nov. 1	✓ 50 ft. Sash cord, from G.S.H., By mess, charge to Feeder House Lock # 68,	Reg. C 16			
" 2	1 Gal. Linseed Oil " " " " " Lock Houses 60 to 72	" "	" "	" "	
" 1	✓ 2 Doz. 5/8" Square nuts " " " " " Repairs Locks 60 to 72	" "	" "	" "	
" 2	✓ 2 Gals. Steam Engine oil, " " " " " Dredge,	C 17			
" 4	✓ 2 Oxford Lamp Chimneys from G.S.H. 1/2 dia. " " " "	" "	" "	" "	
" 4	✓ 4# white Putty " " " " Repairs Lock Houses 60 to 72 " C 16	order # 13-490.			
" 6	✓ 1/2 Gal. Lead color paint, " " " " Lock House # 55, P.E. Dept " C 16				
" 21	✓ 2 Gals. Black oil, from G.S.H. By mess, charge to Dredge	Reg. C 19			
" 21	✓ 10# cotton waste " " " " " "	" "	" "	" "	
" 26	✓ 15# Lump Sulphur " " " " Lock repairs Line " C 14				
" 29	✓ 5# 10D cut nails " " " " Baggage " Lock # 63 P.E. Kennedy " C 19				
" 29	✓ 1 Keg 60 D wire nails " " " " charge to Bridges # 62 x 65" " C 18				
" 29	✓ 1# 153 Night Latch lock " " Mess " to Lock No. 69-70 Myk " C 16				

Material received in December,

, 1935

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of	CHARACTER OF.	TO WHOM.	PORT OF	
Dec. 2	✓ 1	bags of portland cement from G.S.H. by Art. 50 cts.	Lock no 63 Well walls	Reg. C 19	
" 2	✓ 2½ Kgs.	100 Dull nails from G.S.H. by baggage, for Bridges Six + Eight mile levels	" " "	C 18	
Dec. 7	✓ 3	gals. Brown car paint by Art. from G.S.H.	" House #63, Roof.	" C 19	
Dec. 16	✓ 3	pcu. 3x8x16' fir 96' from Lbr. Yd. Rag. by Art.	charge to Lock #63 Well floor	" C 19	
" 16	✓ 1	pc. 10x8x16' Barn pine 11'	" " "	" " "	
" 16	✓ 5	6' B.M. 1¼" flooring	" " "	" " "	
" 17	✓ 1	pc. 6x8x12' fir 48' from Lbr. & mill-work co. York + Butler St. Philadelphia, by Portion T.V. #5916 Barge #50	Reg. C 18		
" 17	✓ 8	" 6x8x11" 352"	" 49 "	" "	
" 17	✓ 8	" 20" 640"	" 49 "	" "	
" 17	✓ 8	" 4x8x20" 417"	" 47 "	" "	
" 17	✓ 1	" 4x8x20" 5754	" 44 "	" "	
" 17	✓ 3	" 4x8x20" 176	" 44 "	" "	
" 17	✓ 2	" 4x8x20" 118	" 43 "	" "	
" 17	✓ 8	" 6x8x11" 352"	" 43 "	" "	
" 17	✓ 1	" 10x12x20" 160"	" 37 "	" "	
" 17	✓ 1	" 6x8x10" 40"	" 30 "	" "	
" 17	✓ 1	" 10x12x20" 200"	" 26 "	" "	
" 17	✓ 1	" 5x8x12" 20' 267	" 26 "	" "	
" 17	✓ 10	" 4x8x18" 48	" 26 "	" "	
" 18	✓ 1	pc. 6x10x12' fir 60' from Lbr. & mill-work co. York + Butler St. Philadelphia, Pa by Portion Lehigh Barge #62 Reg. C 18			
" 18	✓ 7	" 6x8x10" 280"	Valley box cart #5916	" "	
" 18	✓ 8	" 6x8x20" 640"	" 65 "	" "	
" 18	✓ 8	" 6x8x12" 384"	" 65 "	" "	
" 23	✓ 3	pc. 3x12x18' Oak, 162' B.M. from G.S.H. on Rag. car #6641, for Barge #50	Six mile Level	Reg. C 18	
" 23	✓ 3	" 8x8x18" 96"	" "	" "	
" 23	✓ 9	" 3x10x18" 405"	" "	" "	
" 23	✓ 1	" 4x9x16' fir 48"	" "	" "	
" 23	✓ 40	" 3x10x12" 1200"	" 49 "	" "	
" 23	✓ 14	" 3x10x12" 420"	" 48 "	" "	
" 23	✓ 8	" 4x(8)16" (384)"	" 47 "	" "	
" 23	✓ 14	" 3x10x12" 420"	" 47 "	" "	
" 23	✓ 20	" 3x10x12" 600"	" 43 "	" "	
" 23	✓ 4	" 3x8x16' P. 128"	" 41 "	" "	
" 23	✓ 1	" 3x10x16' fir 40"	" 41 "	" "	
" 23	✓ 3	" 8x12x12' Oak, 108"	Eight mile level, 32	" "	
" 23	✓ 2	" 6x12x12" 156"	" 31 "	" "	
" 23	✓ 25	" 3x12x16' Oak, 1200' B.M."	" 30 "	" "	
" 23	✓ 14	" 3x10x12' fir 420"	" 29 "	" "	

Material Received in December January,
CARGO. CONSIGN

1935, 1936 .

Material Received in January

1936

DATE.	No. of	CARGO. CHARACTER OF.	CONSIGNMENT.			INSTRUCTIONS AT
			TO WHOM.	PORT OF		
Jan. 17	✓ 1	1 1/16" x 10" Long Boiler stay bolts, from Loco Shop by mess. Rugboat boiler	Reg. C-6			
" 22	✓ 1	15 1/16" x 15" " crown "	" " "	" "	" "	
" 22	✓ 1	1 1/16" x 6" " Slay "	" " "	" "	" "	
Febr. 3	✓ 3	Stackmatack knee, By Art. P.R.R from the Loskius Co., Baltimore Md. Dredge Reg. C-3 8" wide x 2' 8" high x 4' 6" long,	802 Hearst Power Building			
" 3	✓ 2	Gals. Rubberine roof coating By Art. from, The Ruberoid Co. Mc. Scow.	500 Fifth Ave New York		" "	
" 3	✓ 1	gal. Genuine Ruberoid Plastic cement 10#	" "	" "	" "	
" 3	✓ 2	bars 1/2" Rd. iron, 24# from G.S.H. by Art. on Pag # 14867 Floating Equipment "				
" 3	✓ 1	" 3/8" " 6# "	" "	" "	" "	
" 3	✓ 1	1- 1/8" x 14" x 6' 9" long, Sheet iron 13 boiler stack from Loco Shop by Art. Dredge Reg. C-6				
" 3	✓ 1	- 2 1/2" Dia. Steel prop. Drum shaft 7' 10" long	" "	" "	" "	
" 3	✓ 2	8 7/8" Short links chain new 15 6# 10ft " " Sec. 7th 78 1/4"	" "	" "	" "	
" 3	✓ 1	pc. Brass stern bearing bushing	" "	" "	Rugboat	
" 3	✓ 1	cast iron boiler grade 250#	" "	" "	" "	
" 3	✓ 1	1 1/2" Dia. Steel propeller shaft 10' 7" long.	" "	" "	" "	
" 3	✓ 1	1" 2 3/8" " upright steel swinging shaft 6' 1/4" long 108th	" "	" "	Dredge	
" 3	✓ 1	# 4 3/10 Sellers injector	" "	" "	Rugboat	
" 3	✓ 1	# 7 1/2 "	" "	" "	" "	
" 3	✓ 4	cross stay pins	" "	" "	Dredge slip order # 6	
Rec'd, 2/6/35 at Phoenixville on Reading Rar # 12709						
Feb. 6	✓ 2	pcs. 1" x 14" x 16' cypress, 37 B.M. Shop Lbr. yd.	Small boat,			Reg. C-2
	✓ 2	1" x 4" x 16' W.P. 11" "	" "	" "	" "	
	✓ 5	" 1" x 12" x 16" " 80" "	" "	" "	" "	
	✓ 2	" 1" x 4" x 16" oak 11" "	" "	" "	" "	
	✓ 1	" 1" x 8" x 8" " 5" "	" "	" "	" "	
	✓ 1	" 1 1/2" x 10" x 8" " 10" "	" "	" "	" "	
	✓ 2	" 8" x 8" x 5" " 53" "	" "	Dredge	" C-1,	
	✓ 2	" 6" x 6" x 3' 6" " 21" "	" "	" "	" "	
	✓ 4	" 1" 2' 6" " 30" "	" "	" "	" "	
	✓ 1	" 5" x 8" x 4' 6" " 15" "	" "	" "	" "	
	✓ 1	" 3" x 12" x 8" " 24" "	" "	" "	" "	
	✓ 1	" 2" x 12" x 8" " 16" "	" "	" "	" "	
	✓ 1	" 2" x 10" x 8" " 18" "	" "	" "	" "	
	✓ 5	" 2" x 12" x 24' fir, 240" "	" "	" "	" "	C-2
	✓ 1	" 1" x 12" x 16' Barn pine 16" "	" "	" "	" "	

Material Received in February

1936

DATE.	CARGO. No. of CHARACTER OF	CONSIGNMENT: TO WHOM	PORT OF	INSTRUCTIONS AT
				C-1
Feb. 6	Reed On Rdg Car #12709		Pugboat	
⑥	1 pc. 7"x8"x3'4" Oak 16 BM. From Lbr. Yard,			
	1 " 4"x4"x8" " 11 " " " "		"	" "
	1 " 2 $\frac{1}{4}$ "x12"x4" " 9 " " " "		"	" "
	1 " 2"x12"x4" " 8 " " " "		"	" "
	1 " 2"x10"x12" " 20 " " " "		"	" "
	6 " 3"x8"x7" " 84 " " " Mechanic Scow		"	" "
	2 " 2 $\frac{1}{2}$ x6"x16" " 40 " " " "		"	" "
	1 " " 3'10" " 5 " " " "		"	" "
	1 " 4"x8"x16' fir, 43 " " " " "		"	C-2
	8" 2"x12"x16" " 256 " " " "		"	" "
	1 " 1"x12"x16' Barn P. 16 "		"	" "
	1 Roll Rubberized Roofing 108' Sq. Ft. From G.S.H.		"	" "
	4 " 2"x12"x16' Oak 128 " " " Painter Scow" "		"	C-1
	1 " 1"x12"x16' Barn Pile 16 "		"	C-2
	1 " 2"x12"x16' Oak 32 " " " Dump Scow 192 "		"	C-1
	2 " 4"x8"x16' Fir 86 " " " " "		"	C-2
	5 " 3"x12"x16" " 240 " " " " "		"	" "
	1 " 2"x12"x16' Oak, 32 " " " Dump Scow 192 " "		"	C-1
	4 " 3"x12"x16' Fir 192 " " " " "		"	C-2
	1 " 1"x12"x16' Barn Pile 16 " " " " "		"	" "
	1 " 8"x8"x3'6" Oak, 19 " " " Deck Scow #15 " "		"	C-1
	1 " 2"x12"x16" " 32 " " " " "		"	" "
	1 " 2"x6"x16" " 16 " " " " "		"	" "
	3 " 2"x12"x16' Fir 96 " " " " " "		"	C-2
	1 " 1"x12"x16' Barn Pile, 16 " " " " "		"	" "
	3 " 2"x12"x16' Fir 96 " " " Deck Scow #14 " "		"	" "
	1 " 2"x12"x16' Oak, 32 " " " " "		"	C-1
	1 " 2 $\frac{1}{2}$ "x9"x18" Oak, 3468 " " " Lock no. 63 " "		"	C-19
	1 " 75'- $\frac{7}{8}$ " Steel Cable, Sec. Hd. 93# G.S.H. Dredge " "		"	C-6
	1 pc. 1 $\frac{1}{2}$ " Diam, 12' Long, R.R. pipe, " " "		"	" "
	1 Reg. 3 $\frac{1}{8}$ x5' B. at spikes, 100% from Jenson Steel & Iron Co. Columbia, Pa. Floating Equip. " " "		"	C-2
7	5# white Putty, from G.S.H. by Mess. clearge to Floating Equip. " " "		"	C-3
	2 pes. 4"x8"x22' fir, S.4S. 117' ^{water} From Dalton & Malone & Sons \$5.85, Dump Scow 192 " Laurel St. Wharves, Phila, Pa. " "		"	C-2
	2 pcs. 5"x10"x30' M.P. S.4S. 250 " " " 21.25, Dredge Pipe sole " "		"	C-1
10	9 gals. Brown Gas Paint, From G.S.H. by Freight. Charge to Floating Equip. " " "		"	C-3
	1 " 4" Lead color " " " " " Pugboat " "		"	" "

Material Received in February, March,

1936.

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Feb. 10	✓ 2 bars 3/8" Round iron 15' from Loco Shop, by Mess. Floating Equipment Reps. Reg. C-7				
" 11	✓ 1 ton Bituminous Blacksmith Coal, From S. L. Shanaman charge to Bridges Phoenixville, Pa. (Locks & Floating Eq. Reps.) Reg. C-5				
" 12	✓ 1/3 Doz. Spiking maul handles, by Mess, from G.S.House Bridge repairs				" "
" 12	✓ 2 1/2 lbs 3/8" Square nuts 7/8"	"	"	"	Floating Equipment Reps. " C-7
" 12	✓ 2 1/2 lbs 1/4"	" 1/4"	"	"	" "
" 12	✓ 1/2 lb 12" Stack saw Blades	"	"	"	" "
" 12	✓ 1/3 lb Star saw m.c. Stand 2 18"	"	"	"	" "
" 12	✓ 1/2 lb 10" Great American Saw files..	"	"	"	" "
" 19	✓ 2 bbls ^{Pine Green} Boat Pitch by Freight from Geil Naval Store Co. 230 Park Ave. New York.				Floating Equipment Reps. Reg. C-3
" 19	✓ 1/3 Doz. Pick handles from G.S.H.				Beds & Banks repairs Reg. C-6
" 20	✓ 9 pcs. 2" X 12" X 16' Fir by Freight from G.S.H.	288' B.M.			Flat Rock Dam, Reg. C-4
" 25	✓ 5/8" X 1" Flat iron 12# from G.S.H. by mess				Dredge Reg. C-8
" 25	✓ 1/4" Rd iron ^{sec'd} 5 1/2#	"	"	"	Floating equipment repairs, Reg. C-7
March 2	✓ 1 - 1 1/4" Armstrong Pipe Die, Sec'td. from G.S.H. by mess, Dredge use				Reg. C-8
" 2	✓ 1 - 7/8" solid machine bolt die, Sec'td.	"	"	Mechanic Scow use	" "
" 2	✓ 1 3/4"	"	"	"	" "
" 2	✓ 12" Swinging chain Post ^{6#} Sample from Loco Shop, by mess. Dredge				Reg. C-6
" 9 th	1 pc. 3" X 12" X 8' Oak from Lbr. 24d. Rdg. by Freight Dipper pole, Had Rec'd the 2 pcs. above were to small in size and Returned these, send back Feb. 11 1936 were on Reg. C-1 " 9 th 1/2" 2" X 12" X 8'	"	"		
" 25	✓ 8 mops to Paddle Boats Art. Claim from G.S.H. by mess. Floating Equipment,				Reg. C-4
" 27	3 corn Brooms from Geil. Storehouse by mess, Dredge Supplies				
" 27	✓ 2 cedar water Buckets from G.S.H. by mess.				
" 27	✓ 1 Potato masher Sec'td.	"	"	"	"
" 27	✓ 2 Oxford Lamp chimneys 2 1/2" diam from G.S.H. by mess.				
" 30	✓ 1 pc. Sheet steel 1/4 X 4 3/4" X 9 ft long from Loco S. by Pdt. new Dipper Pole				Reg. C-9
" 30	✓ 70' Rd. iron 1/2" reamed	"	"	"	"
" 31	✓ 100z. 1 lb. cans Caustic Soda from G.S.H. by mess Dredge Supplies				
" 31	✓ 4 lbs ³ 1/4 oz ⁴ 3/4 lbs Kearsarge Rod packing # 3. 166 from G.S.H. by mess Dredge				
" 31	✓ 1# 5oz. 1/4" Water Pump packing from G.S.H. by mess Dredge				"
" 31	✓ 1 Ball 1/2" asbestos packing	"	"	"	+ Pug
" 31	✓ 4 Sheets # 2 Emery cloth	"	"	"	"
" 31	✓ 5# asbestos Furnace cement	"	"	"	"

Material Received in April

1936

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
April 4	2	Long handles for scoop shovels, from G.S.H. by mess	Dredge & Tug Subs Reg. C-10		
" 4	1/4 ton, 1/2 square nuts	#3 lbs.	" " "	Floating Equip. repairs	" "
" 4	6 5 Gals Kerosene	" " "	Mechanic Scow Supply	" "	
" 4	1 bar Soft Solder 50-50 2 lbs	" " "	" " "	" "	
" 6	400 ft 1" Dia. manila rope 104#	" " "	by Port Dredge & Tug boat	" Reg. C-9	
" 6	10 gals. Black Oil	" " "	" " "	" "	
" 6	10 " Steam Engine Oil	" " "	" " "	" "	
" 6	10 " cylinder "	" " "	" " "	" "	
" 6	15 " Kerosene	" " "	" " "	" "	
" 6	1 Steel Barrel #1245 note - to be returned, Returned April 16, 1936 also 3-10 gal cans	" " "	" " "	" " "	
" 6	Pallow 10#	" " "	" " "	" "	
" 8	3 dusting Brushes from G.S.H. by mess	" " "	" " "	" "	
" 8	30 ft. 5/8" Dia. manila rope 4#	" " "	for dredge	Reg. C-10	
" 8	1-1/4" (Chuck) wire S.S. for saws	" " "	" Mc. Scow supply	" "	
" 11	2 Vegetable dishes from G.S.H. by mess. Dredge	" " "	" " "	Reg. C-9	
" 11	chopping at with handle from G.S.H. by mess, Blue Mt Dams	" " "	" " "	Reg. C-10	
" 16	2 pcs. Oak 8" x 12" x 16' 256 B.M. from Philip Leibzelter + Son Co	1/10 c. for mc. scow Lancaster 1/2 a. Bal. \$5.00 Bill \$15.75	for mc. scow Deck #15	Reg. C-15	
" 16	1" " 2" x 12" x 22' 44"				
" 16	1" " 2" x 4" x 22' 15"	" " "	" " "	" C-1	
" 18	1 Gal. Black Boiler Paint, from G.S.H. by mess	" " "	for Dredge & Pugboat Boilers	C-10	
" 18	1" Yellow paint	" " "	" " "	" "	
" 20	6 Pcs. Oak 10" 2" x 12" x 6' 72' B.M. from Lbr. 45 Reg. on Rdg. for. Wood care issued	" " "	" " "	Reg. C-10	
" 20	30" " 2" x 6" x 6' 18" "	" " "	" " "	" "	
" 20	1 pc. Fir 6" x 6" x 24" 120" "	" " "	" Boat Yard Trunk	" "	
" 20	1" " " 16" 80" "	" " "	" " "	" "	
" 20	4" " " 4 x 8 x 16" 171" "	" " "	" " "	" "	
" 20	1" " " 6 x 8 x 21" 84" "	" " "	Browers Waste Wks.	" "	
" 20	1" " " 16" 64" "	" " "	" " "	" "	
" 20	4" " " 6 x 9 x 5" 90" "	" " "	" " "	" "	
" 20	18" " " 2 x 12 x 16" 576" "	" " "	" " "	" "	
" 28	12" 1/2" x 10" Wire Spikes	" " "	currents Oaks Canal	" "	
" 28	8" Wire Spikes 30#	" " "	" " "	" "	

Material Received in May, June, July, August,

1936

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
May 9	✓ 2	14 lbs. leaded. Deck buckets from G.S.H. by mess	Dredge		Reg. C-9,
" 11	✓ 1 car	Pea Coal or Rdg. Cart # 81315	Dredge andugboat	"	C-11
" 11	✓	4" flat paint brush from G.S.H. by mess.	Dredge & small boat	"	C-11
" 20	✓ 2 gals. Brown car paint from G.S.H. by mess.	Dredge & small boat	"	C-11	
" 26	✓ 1 pc. 1/2" pipe union valve from G.S.H. by mess	Pugboat		Reg. C-12	
" 26	✓ 1 "	corn broom	" " "	"	" "
" 26	✓ 1/2" cut washers 4#	" " "	lock repairs	"	" "
" 26	✓ 100 ft. 3/4" Diam. rope	" " "	lock no. 66, conch ladder	"	" "
" 27	✓ 2 pcs. Rattan brooms Slickeret Fibre brooms	" " "	Dredge	"	" "
" 29	✓ 32 bags Portland cement	" by freight	Norristown Waste weir	"	" "
June 21	✓ 1 car	39.20 tons one man stones from the John T. Dryden quarry Co. on Rdg. car no. 29163 Art. Bill #444.04, Price of stone .90 per ton 35.28			
" 4	✓ 6 pcs. 3x12x16 fir	288 B.M. from Stor. Yd. shop by Arti.	for Norristown Waste Weir, Rdg.		C-12
" 12	✓ 4 C.Y. Building Sand	from Wayne Jct. on Rdg. Car 11019, charge to Norristown W.W.	Norristown Waste Weir	"	" "
" 13	✓ 1-12# Sec. Hd. Sledge Hammer	from G.S.H. by mess for Dredge			Reg. C-13
" 15	✓ 400g. 3/4" Sq. nuts 12#	" " "	lock repairs	"	" "
" 15	✓ 100g. 1 1/8" " 8#	" " "	Dredge	"	" "
" 15	✓ 150 ft. 1 3/4" diam. Manila rope 24#	" " "	Mechanic Screw Supply	"	" "
" 15	✓ 140 " " 1" " 37#	" " "	"	" "	" "
" 15	✓ 1 new Sledge Hammer	" " "	Dredge	"	" "
July 21	✓ 2 East iron stationary chisels 50# from Loco Supf.	Dredge			Reg. C-15
" 29	✓ 76 ft. lin. 5/8" Diam. Manila Rope, from East. S.D.F. by mess	Lock no. 72	"		C-14
" 29	✓ 10# 80 wire nails, brown G.S.H. by mess.	" House no. 12	"		C-14
Aug. 3	✓ 1 gal. Screw cutting Oil, from G.S.H. by mess.	charge to Lock Repairs			Reg. C-15
" 3	✓ 1 gal. Linseed Oil	" " " " "	lock house repairs	"	" "
" 4	✓ 1 12# Sledge Hammer from G.S.H. by mess	charge to Dredge			Reg. C-13,
" 6	✓ 4 gals Brown Car Paint from G.S.H. by mess.	Roof Lock House 66	"		C-18,
" 8	✓ 1 Sledge Hammer Handle	" " " " "	charge to Dredge		Reg. C-13,
" 10	✓ 36 ft. lin. 5/8" Diam. Manila Rope 54# from G.S.H. by mess	lock no. 72,			Reg. C-14
" 10	✓ 150 ft. lin. 1 1/2" Diam. Manila rope 12# from G.S.H. by mess	lock no. 68			Reg. C-15
" 25	✓ 10 gals Red engine oil from G.S.H. by Artis Car Rdg. 12257	Dredge & Pug			Reg. C-16
" 25	✓ 5 gals. black oil	" " " " "	" "		" "
" 25	✓ 5 lbs. cotton waste	" " " " "	" "		" "
" 25	✓ 1 bbl. Kerosene	" " " " "	Water Power Feeder Stone Reg.		C-15
" 25	✓ 5 gals. black oil	" " " " "	" " " " " " "		" "

Material Received in August, & September,

1936

DATE.	No. of.	CARGO. CHARACTER OF.	CONSIGNMENT.		INSTRUCTIONS AT
			TO WHOM.	PORT OF	
Aug. 17	✓	62 tons, 1 car hard burning, Fresh mined Anthracite pea coal, Dredge Aug			Reg. C-16
" 20	✓	1 pc. 12" x 12" x 30' U.P. 360' B.M. from Philadelphia by truck,	Dredge		C-16
" 25	✓	35 pcs. 2" x 12" x 16' fir 1120' B.M. from Bagan Reg. No. 12257 at Venice Br. via Penobscot.	Frat Rock Dams		Reg. C-16
"	✓	5 " 3" x 12" x 16" .. 240' B.M. "	" Lock 200.69-70		" "
"	✓	2 " 6" x 9" x 21" .. 189 "	" "	" "	" "
"	✓	2 " 1" x 2" x 12' ash 4" "	" Lock no 72		" "
"	✓	2 " 6" x 5" x 4" fir 17 "	" "	" "	" "
"	✓	2 " 2" x 12" x 16" .. 64 "	" "	" "	" "
"	✓	1 " 2" x 6" x 16" Sap. pine 16 "	" "	" "	" "
"	✓	6 " 1" x 6" x 8' Barn pine 24 "	" "	" "	" "
"	✓	4 " 1" x 12" x 16" .. 64 "	" "	" "	" "
"	✓	1 " 1" x 6" x 9" .. 5 "	" "	" "	" "
"	✓	8 " 1" x 6" x 14' W.P. flooring 56 "	" "	" "	" "
"	✓	Molding 90 ft. lin.	" "	" "	" "
" 24	✓	4 Doz. $\frac{5}{8}$ " Square nuts, ^{b#} from G.S.H. by mess. lock repairs			Reg. C-17,
Sept. 10	✓	1/2 Doz. 12" Hack saw blades from G.S.H. by mess.	lock repairs		Reg. C-18
" 10	✓	1 Steel file Brush	" "	" "	" "
" 10	✓	2 Sash cord pulleys	" "	" Mauk Water Power, Scioto Mills,	" "
" 10	✓	33 ft copper sash chain	" "	" "	" "
" 10	✓	1 1/2" copper float 27d Hds.	" "	" "	" "
" 29	✓	1/2 Keg 600 wire nails ^{50#} from G.S.H. by Baggage Bridges 3-4-10 & Lock. #61			Reg. C-20
" 29	✓	5 pcs. cast iron Spud racks, 426 [#] " by Freight Dredge			Reg. C-18
" 30	✓	7" ^{20#} wire spikes ^{20#} from G.S.H. by baggage Bridge #52, 100 ft. Reg. C-19			
" 30	✓	7" " " 60# " by S.H. truck	Burgess St., Reg		Reg. C-20
" 30	✓	2 1/3 yds. White Table oilcloth 45" wide 34 Pcsyd. .80 x for Mechanics crew			Reg. C-18
" 30	✓	1 Borzouev winding wheel, 7" x 1 3/8" x 15/16" hole	from N. Snelleberg & Co. Market 11 to 12 Phila. Pa.	" "	
"			mechanics crew use	" "	
			from Abrasive Company Factory & Fralay Sts. 13 Bridgeburg, Phila. Pa.		

Material Received in October

1936

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of	CHARACTER OF	TO WHOM	PORT OF	
Oct. 5	✓ 1	Pc. 10" x 12" x 20' fir 200' B.M. from The Lbr & Millwork Co., York & Butler St. Phila. Pa.	Bridge #3		Reg. C-19
" 5	✓ 1 "	" 18" " 180" "	"	"	"
" 5	✓ 3 "	" 16" " 480" "	" #24	"	"
" 5	✓ 1 "	4" x 8" x 20" " 53" "	Car	"	"
" 5	✓ 1 "	4" x 10" x 18" " 60" "		Bridge no. 4	"
" 5	✓ 1 "	10" x 12" x 24" " 240" "	Received	Bridge no. 10	"
" 5	✓ 1 "	" 20" " 200" "	"	"	"
" 6	✓ 2 "	12" x 12" x 30' fir 720' B.M.	"	Bridge no. 45	Reg. C-20
" 6	✓ 3 "	" 26" " 936" "	"	"	"
" 6	✓ 8 "	10" x 12" x 26" " 2880" "	"	"	"
" 6	✓ 2 "	12" x 12" x 3" " 72" "	"	" 51	"
" 6	✓ 5 "	10" x 12" x 24" " 1200" "	Car	"	"
" 6	✓ 1 "	" 22" " 520" "	"	"	"
" 6	✓ 2 "	10" x 10" x 20" " 333" "	Received	"	"
" 6	✓ 3 "	" 16" " 400" "	"	"	"
" 6	✓ 2 "	4" x 10" x 26" " 173" "	"	"	"
" 6	✓ 18 "	3" x 12" x 20" " 1080" "	"	Binghamton St. Bridge, n.	"
" 6	✓ 1	Keg 7" wire spikes 100# from G.S.H., by Art. Bridges 8 mile level	"	"	"
" 6	✓ 60	wire nails 62#	"	"	"
" 7	✓ 1	Pc. 4" x 8" x 16' fir 43' B.M. from Lbr. Yard, by S.H. Breck, Binghamton Bridge Reg. C-20,			
" 7	✓ 3	Pcs. 10" x 12" x 20" " 600" " from Lbr. & Millwork Co., Phila. Pa.	Bridge no. 31	"	"
" 7	✓ 1 "	" 16" " 160" "	"	"	"
" 7	✓ 1 "	6" x 8" x 22" " 968" "	"	" 33	"
" 7	✓ 1 "	" 20" " 880" "	"	"	"
" 7	✓ 1 "	10" x 12" x 20" " 200" "	"	" 30,	"
" 7	✓ 2 "	4" x 8" x 22" " 117" "	Car	"	"
" 7	✓ 4 "	" 20" " 213" "	Car	"	"
" 7	✓ 1 "	" 22" " 59" "	Received	"	" 28,
" 7	✓ 1 "	" 22" " 54" "	"	"	" 41,
" 7	✓ 8"	wire spikes 30# from G.S.H. by Art. Bridges 6 mile level Reg. C-21			
" 7	✓ 7"	" 40# "	"	"	"
" 7	✓ 60	wire nails 12# "	"	"	"
" 9	✓ 20	doz. $\frac{1}{4}$ " square nuts $\frac{3}{8}$ # "	by mess	Stock repairs,	"
" 9	✓ 2	78" "	"	"	"
" 9	✓ 1 "	78" "	"	Bridge repairs	"
" 1	✓ 1 "	" 6# "	"	"	"

Material Received in October, November,

1936

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Oct. 12 ✓	1 Pce. 8" x 12" x 20' fir	from L.B.M. from Lumber & Millwork Co.	Bridge no 57	Rdg. car #21368	Reg. C-19.
" 12 ✓	1 " 4" x 12" x 20' "	80' " York Road & Butler St. Philadelphia	"	Bridge # 57	" "
" 24 ✓	1 gal. white paint	from G.S.T. by mess	Lockhouse #12		Reg. C-22
" 26 ✓	30 tons, anthracite furnace coal,		Dredge & Rng		" "
Nov. 3 ✓	2 Corn brooms	from G.S.T. by mess	Dredge & Rng		Reg. C-24
Nov. 3 ✓	1/10 lbs. Cotton Waste	" " "	" " "	" " "	" "
" 4 ✓	1 (long) spout oil case	^{End 3 ft 6 in.} From G.S.T. by mess	"		" "
" 4 ✓	1 pc. 5" Diam. Stove pipe 2 ft long	from G.S.T. by mess	"		" "
" 4 ✓	1 " 5" Diam. one end 7" Diam.	" " "	" " "	" "	" "
" 5 ✓	other end Stove pipe - paper 2' length				
" 5 ✓	2 Pcs. 11" x 17" Double thickness American Window Lights	from empl. S.H. by mess. Shop Stock	"		" "
" 5 ✓	1 " 10" x 12" "	" " "	" " "	" " "	" "
" 5 ✓	1 car fresh-mined anthracite Pea coal,		Dredge & Rng.		Reg. C-23.
" 6 ✓	3 qds. Brown car paint, from G.S.T. by mess		Port Lockhouse #33	Reg. C-24.	
" 6 ✓	1 Pump Handle (no. 2927) for Myers Pump from F. E. Myers	Lockhouse #62			" "
" 6 ✓	1 " rock (no. 2827)	from F. E. Myers Bro. Co. ashland Oils	" " "	" " "	" "
" 9 ✓	3 1/4 yds. x ^{50"} _{3 1/2"} wide, white oilcloth portable	from N. Snellenburg, Phila, Pa. Bill #30	Dredge		Reg. C-24
" 9 ✓	20 lin. ft. Rd. Iron ^{1/4} " Plrd. Steel from G.S.T.		Lock Repairs		Reg. C-22
" 9 ✓	20 " " " ^{1/6} " Sec. Hd. 5# "	"	Floating Equipment	"	" "
" 9 ✓	20 " " " ^{3/8} " " " 7 1/2# "	"	" " "	" " "	" "
" 9 ✓	4 Bars ^{5/8} " Rd. Iron Sec. Hd. 67# "	"	Lock repairs	"	" "
" 9 ✓	16 lin. ft. Sq. iron ^{3/8} " sec. Hd. 7 1/2# from G.S.T.	"	" " "	" " "	" "
" 9 ✓	16 " " " ^{1/2} " Rd. 14# "	"	Bridge repairs	"	" "
" 11 ✓	1 Pce. Oak 3" x 12" x 20' 60' B.M. from A.C. Beck, Slipperyburg, Pa.	Bridge #45	Reg. C-21		
" 11 ✓	1 " " 3" x 8" x 20' 40" "	" " "	" " "	" " "	" "
" 11 ✓	53" " 3" x 10" x 16" track	" " "	Bridge #33	"	C-20.
" 14 ✓	2 1/4" x 7 1/2" Bolts 9 1/2# from G.S.T. by mess		Dredge		C-25
" 14 ✓	2 1/4" nuts	" " "	"	"	" "
" 14 ✓	3 Pcs. 3" x 12" x 16' Oak 144 B.M. Lbs. 4 yard on Rdg. car #5357, Bridge #57			Reg. C-19	
" 14 ✓	3 " 3" x 10" x 16" " 120. "	" " "	" " "	" " "	" "
" 14 ✓	2 " 3" x 8" x 16" " 64" "	" " "	" " "	" " "	" "
" 14 ✓	2 " 2" x 8" x 2' oak, 5" "	" " on Rdg. car #4434	Bridge #2742	"	C-20.
" 14 ✓	8 " 3" x 12" x 12' Fir, 288" "	" " "	" " " 37	" "	" "
" 14 ✓	1 " 3" x 12" x 16" " 483 1/2" "	" " "	" " " 10 " "	" "	" "
" 14 ✓	7 " 3" x 12" x 16" 336" "	" " "	" " " 31	" "	" "
" 14 ✓	1 " 2" x 8" x 2' 4' oak	" " "	" " " 28		

Material Received November, December^{4th} January 1937. 1936.

DATE.	CARGO.		CONSIGNMENT.			INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF		
Nov. 14 ✓	7 pcs. Fir 3"x12"x16' 336' B.M. Pallet from Elby & Co. on Rdg # 1434 Bag # 41, Reg. C-20					
" 14 ✓	8 x Oak 3"x12"x16' 384' " S,	" "	" "	" "	51 "	C-21
" 14 ✓	8" " 3"x10"x12' 240' " S	" "	" "	" "	49 "	" "
" 14 ✓	6" " 3"x8"x16' 192' " S	" "	" "	" "	45 "	" "
" 14 ✓	1" " 3"x12"x1" 3" " S	" "	" "	" "	51 "	" "
" 25 ✓	2 Gals. Steam ^{engine} cylinder oil, from G.S.H. by mess.		Dredge + Pug		Reg. C-26	
" 25 ✓	1 6" Dia. Smoke stack comp. with roof section & Hood by Prest # 20 gauge Galv. iron See Hand 14 ft total length.		Lock House # 64		Reg. C-26	
" 27 ✓	10 Gals. Kerosene from G.S.H. by baggage	Dredge + Pug			" "	
" 28 ✓	2 Oxford lamp chimneys " by mess.	"			" "	
Dec. 15 ✓	192. Breech clippers, 24" handles # 5408 from Supply Biddle Ave. Co 511 commerce St. Philadelphia Pa					
" 23 ✓	3 Canal type metal body wheel barrows, from Ford + Keating Co. Harrisburg Pa Rec'd by freight charge to One mile level				Reg. C-27 C-26	
" 29 ✓	6 Long handles Round point Shovels from G.S.H. by Baggage 4 Oaks Canal 2-1 mi level Reg					C-26
" 29 ✓	1 Lg. Rd. pt. Shovel handle new. from G.S.H. By Mess. Dredge					C-26

1937

JULY 2	✓ 2 Caboose stove drop grates #495, from U.S.H. by mess, charge to Dredge & Reg. Reg. C-2.
" 5	✓ 1 Stack saw frame new, from U.S.H. by mess, charge to Bridge Scary Repairs, Reg. C-26
" 7	✓ 50 ft. 5/16" soft steel cable sec. 77d. from Scraperd. Lock House #60 Reg. C-27,
" 7	✓ 1/2 Doz. 12" Stack Saw blades new from U.S.H. Dredge & Reg replaces, Reg. C-27
" 11	✓ 100# 8D wire nails, from U.S.H. by Freight Repairs Floating Equ. Reg. C-27 Locks, dock doors, & Edges.
" 11	✓ 100# 10D " " " " "
" 8	✓ 1 pc. 6" x 9" x 6' fir new 27' B' N. by Port. car 6541 Bridg no. 33 Reg. C-20
" 8	✓ 1 " 6" x 9" x 4' 6" " 21' " " " " " " 45 " "
" 8	✓ 8" 8" x 11 3/4" x 17" " 200" " " " " " " 38 " C-20 399"
" 8	✓ 7" 3" x 11 3/4" x 17" " 350" " " " " " " 44 " C-21
" 8	✓ 3" 3" x 11 3/4" x 17" " 150" " " " " " " 41 " C-20
" 8	✓ 12" Oak wedges " " " " " " " " " " 45 " C-22
" 11	✓ 3" 6" x 12" x 4" new. 72" " " " " " " Bridget 3 " C-19
" 11	✓ 1" 6" x 12 1/2 x 12" " 75" " " " " " " " " " "
" 11	✓ 1" 6" x 9" x 6" " 27" " " " " " " 4 " "
" 11	✓ 1" " 4' 6" " 20" " " " " " " 3 " "
" 11	✓ 8" 3 1/2" x 8 1/2 x 13" " 208" " " " " " " 3 " "
" 11	✓ 12" 3 1/2 x 10 1/2 x 12" " 441" " " " " " " 3 " "
" 11	✓ 2" 3 1/2 x 10 1/2 x 32" " 196" " " " " " " 3 " "
" 11	✓ 5" 3" x 11 3/4 x 17" " 250" " " " " " " 4 " C-19
" 11	✓ 4" 3" x 8" x 16" Y.P. " 128" " " " " " " 4 " "

21st

Material Received in January, February, March, 1937

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Jan 11	✓ 6 Pcs. 3" x 8" x 16' y.p. new. 192' B.M. by Flat car 6541		Bridge Lock 61		Reg. C-19
" 11	✓ 1. 3½" x 8½" x 18' fir " 45"	" "	" 219.9		" "
" 11	✓ 5" 3" x 8" x 16' y.p. " 160"	" "	" " 10		" "
" 12	✓ 1 #3 D.H. Scoop Shovel neck, from G.S.H. by Mess, Dredge				.. C-26
Feb 6	✓ 6 Pcs. Steam gauge fibre washers #7751, from G.S.H. by Mess, for Dredge & Tug				Reg. C-1
" 13	✓ 2 no. 5 mud Plugs from G.S.H. by mess	Dredge and Tug			Reg. C-3
" 19	✓ 50 ¾" x 1" bolts, from G.S.H. by Baggage Plug				Reg. C-3
" 19	✓ 50 ¾" Square nuts 2# "	" "	" "		" "
" 19	✓ 278 ¾" x 1" Rivets 13# "	" "	" "		" "
" 19	✓ 8 ¾" x 4¼" 2# "	" "	" "		" "
" 19	✓ 17 ¾" x 1¼" 4# "	" "	" "		" "
" 19	✓ 12 ¾" x 1¼" 4# H# "	" "	" "		" "
" 19	✓ 6 ¾" x 7½" bolts Countersunk Heads	" "	" "		Reg. 2
" 19	✓ 6 ¾" Hexagon nuts 3½" G.S.H.	" "	" "		" "
" 19	✓ 4 Doz. ¾" Square nuts, 12#, from G.S.H. "	" "	Bagge, repairs		C-1
" 26	✓ 16½ lbs. extra hard babbitt Parson's W.B. Mess.		Dredge		C-4
" 12	✓ 5 #1 fire extinguisher charges "	" "	Lock no. 60		C-27
" 12	✓ 2½ gals. A.T.S. fire extinguisher "	" "	" "		" "
Mar.	✓ 2 pcs. 2" x 4¼" drawbar ferrules, from G.S.H. By Mess	Dredge boat			Reg. C-3
✓ 4" cylinder rings,		Tug Slop	"	Dredge	C-2
✓ 2 Dredge eng. bolts ¾" x 2 ⅝"		" "	" "	"	C-2
✓ 1" 12" stand bastard file	From G.S.H.	" "	" "	"	C-1
✓ 6 Pcs. 3" x 8" x 16' Oak. 192' B.M. from Lbr. 2yd. Reg. Lock House #64					" "
✓ 1" 3½" x 8½" x 14' fir 35"	" "	" "	" "	" "	" "
✓ 6" 4" x 8" x 16" 256"	" "	" "	" "	" "	" "
✓ 6" 3½" x 8½" x 12" 179"	" "	" "	" "	" "	" "
✓ 1" 1" 1" x 12" x 10' Oak 10"	" "	" "	Small boat, Dredge	"	C-2
✓ 2" 6½" x 10½" x 10' 157" to 8" "	" "	" "	Tug boat	"	" "
✓ 1" 4" x 12" x 2½" 10"	" "	" "	" "	"	" "
✓ 1" 3" x 12" x 18' cypress 54"	" "	" "	Floating Equipment	"	" "
✓ 1" 8" x 8" x 4' Oak 22"	" "	" "	Repairs to Lock Gates	"	" "
✓ 2" 2" x 12" x 16' fir 64"	" "	" "	Deck Scow repairs	"	" "

Material Received in March, April.

1937

Material Received April

1937

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
April 2 ✓	1 Gal.	Red Lead Paint	from G.S.H. by Mess	Dredge boat	Reg. C-6
" 2 ✓	1 Gal.	White paint	" "	" "	" "
" 6 ✓	4 Sheets	#2 emery cloth	" "	" "	Dredge & Dug repairs Reg. C-6
" 6 ✓	1 Doz.	1# Cans Caustic Soda	" "	" "	Dredge and Dug supplies "
" 6 ✓	6 Pcs.	1/2" x 1" Patch bolts 2#	" "	" "	Dug repairs "
" 7 ✓	1 "	#118 Handle for main cross cut saw.	" "	" "	Dredge "
" 7 ✓	2 "	Brooms Palm fibre	" "	" "	" and Dug supplies "
" 8 ✓	pe. 1/16" thick	1/2" x 1/2" Sheet Lead 4#	" "	" "	" "
" 8 ✓	2 Pcs.	Afford Lamp Chimneys 2 1/2" dia	" "	" "	Dredge supplies "
" 8 ✓	1 ft.	14 St. Galv. Water bucket,	" "	" "	" "
" 8 ✓	2	corn brooms	" "	" "	" "
" 12 ✓	10 Lbs	Rallow	from G.S.H. by Art	" "	" C-7
" 12 ✓	5 "	cotton waste	" "	" "	" "
" 12 ✓	10 GALS.	Steam Engine oil	" "	" "	" C-6
" 12 ✓	5 "	Steam Cylinder	" "	" "	" "
" 12 ✓	10 "	Rec. car Oil	" "	" "	" "
" 12 ✓	10 "	Kerosene	" "	" "	" "
" 12 ✓	1 Box	1/2" garlock packing #150 2lb. 3 oz.	" "	" "	" "
" 16 ✓	130 ft.	1 1/4" Manila rope 51 lbs. (from G.S.H. by Art)	Dredge, Dug & Saw	" "	C-6
" 16 ✓	400 "	1"	" "	" "	" "
" 16 ✓	300 "	3/4"	" "	" "	" "
" 16 ✓	50 "	9/8"	" "	" "	" "
" 12 ✓	1 Pcs.	3' x 3' Sheet asbestos 1/16" thick	by Bag	" "	Supplies C-7
" 12 ✓	1 "	2" x 2" Rubber 1/8"	" "	" "	" "
" 17 ✓	2000 Lbs.	Bituminous Coal from St. Lawrence, Que.	Floating Equip. Lock & dykes	" "	" "
" 24 ✓	50 Lbs.	126. Pcs. boiler compound	From Henry Bauer Dredge & Dug Boilers, Chemical Co. Phila. Pa.	" "	C-6
" 28 ✓	1 "	12" Hand bastard file, from G.S.H. by Mess	Dredge repairs	" "	C-6
" 28 ✓	1/2 Doz.	12" Jack saw blades, "	" "	Dredge & Dug repairs	" "

Material Rec'd, May, 1937, June July,
CARGO. CONSI

1937

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
May 3	✓ 2	Dusting brushes, from G.S.H. by mess.	Dredge & Pug.	Reg. C-6.	
" 5	✓ 2	Manure Pots, from Stachter Harde Co. by mess	1-8 mile level 1-2 socks no. 68,	" C-8.	
" 6	✓ 1	1-14 qt Galv'd. Water Bucket, from G.S.H. by mess.	Mechanic Scow	" C-9.	
" 10	✓ 2	Clothing axes with handles from G.S.H. by mess.	charge 1 lock 68 " 1-8 mile level	" C-8	
" 13	✓ 2	Paint Brushes	" " " Mechanic Scow repairs	" C-9.	
" 28	✓ 1	cast iron Dipper Cage Sheave, 10½" from G.S.H. by baggage	Dredge	" C-9	
" 28	✓ 1	Steel dipper Cage shaft.	" " " "	" "	
 <u>June 4</u>					
" 4	✓ 1	Grass Scythe, Second Hand, from G.S.H. by mess	Eight mile Level Reg.	C-11	
" 4	✓ 1	Sabre Second Hand	" " " " "	" "	
" 9	✓ 1	Box. 7/8" Square Nuts 1½#	" " " " " Feeder House 68	Reg. C-10	
" 7	✓ 1	10 oz cup Glass 2", Diam x 2 3/8 sq.	by mail Pugboat	" C-7	
" 22	✓ 1	Pc. 3" x 6' x 16' fir S.4.S. 24' B.M. from S.S. Keely & Sons Dump Scow 1926. Special Order			
" 22	✓ 1	" 3" x 8" x 16" " 32 "	" " " " "	" "	
" 23	✓ 1	Gal. Ivory Flat Wall paint	G.S.H. by mess Lock House 63	Reg. C-10.	
" 25	✓ 10#	Tinkers Cement from G.S.H. by mess Rps. to Lock House P.F.	Reg. C-12		
" 25	✓ 5#	Rubberized Roofing Nails	" " " " "	" "	
" 25	✓ 2	Box. 1/2" Square Nuts 1 3/4#	" " " " " Dredge repairs	" "	
" 15	✓ 1/2 bundle	18" cedar shingles, from Andrews & Son Phoenix. Lock House 59	Reg. C-7		
" 28	✓ 20 ft. box 7/8 Rd. Iron Third Steel from G.S.H. 20 lbs. by Art's Feeder House 68	"	C-10		
" 28	✓ 10 lbs.	cotton waste, from G.S.H. by mess.	Pug & Dredge	" C-12	
 <u>July 1</u>					
" 7	✓ 1 car	Pea coal by Freight	Dredge & Pug	Reg. C-12	
" 8	✓ 2	Stoising and backing Clutches, by mess	cleaning tanks	" C-11	
" 8	✓ 4	Pcs. Oak. 3" x 6" x 12' 7 1/2 B.M. from L.D.Y.d. by Art's Feeder House 68	Reg. C-10		
" 7	✓ 4	Pcs. 1.P. 3" x 5' x 16' 12 8' 13" M.	" " " " " Lock House 61	" "	
" 9	✓ 1	Pc. 2" x 12" x 16' fir S 15 30' B.M.	" " " " " 63	" "	
" 9	✓ 1	" 1" x 12" x 16' Bass Pine S 15 16' B.M.	" " " " " "	" "	

Property of
HISTORICAL SOCIETY
Port Clinton, Pa. 19549

Material Received in August, September, October, Nov. 1937

DATE	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
August					
20 ✓	1	Grass scythe new Proves G.S.H. by Mess	Lock 61		Reg C-14
20 ✓	1	Snathes Sec'd.	" " "	"	" "
20 ✓	2	Say the whet stones	" " " "	" + Congy Canal	" "
20 ✓	1	pc. 198' 1 1/8" x 34" ft. ^{20 ft} from new	" " "	Dredge	" "
21 ✓	1	5 gals. Steam Engine Oil	" " "	" + Aug	" "
21 ✓	1	100 Black boiler paint	" " "	" " "	" "
21 ✓	3 pcs.	5" Tapered iron rods	" " "	Repairs in old houses.	" "
12 ✓	1	9 ft. 3" abt 571 lb. Cast Iron	" " "	Dredge	" C-15
Sept. 4 ✓	1 pc.	Spotted oil Can Eng. spring Proves G.S.H. by Mess	Pug boat		Reg C-15
" 10 ✓	1 R	Pig Iron 4" x 8" x 7' 19' B.M.	Lumberyd by Art. Lock House 68 - T.R.E. Order 13-03-200	Reg C-15	
" 10 ✓	1 "	4 P. " 3x4" x 16' 16"	" " " "	" " "	" "
" 10 ✓	1	10" Pig Iron 2" x 6" x 18' 12"	" " " "	" " "	" "
" 9 ✓	1	4 gals. Ruberine Paint from G.S.H. by Art.	Roofs Lock 68		Reg. C-14
" 9 ✓	6 "	Brown var "	" " " "	" " "	" "
" 9 ✓	12 lbs	Roof Cement "	" " " "	" " "	" "
" 15 ✓	1 bbl.	Kerosene 50 gals.	" " " Feeder House F. & S		C-16
" 15 ✓	1	Steel Barrel # 867 was Perforated 9/15/33, in Grease Tank,			
" 17 ✓	2	Gals cream color paint "	by Mess Lock House 68		" C-16
" 27 ✓	2	Corn brooms from G.S.H. by Mess	1 Pug + 1 Dredge		Reg C-16
" 27 ✓	14 pcs.	2 ft. Sq. 5" Galv. Iron Stove Pipe, from G.S.H. by Mess	Feeder House 68		" "
Oct. 11 ✓	30 tons	Furnace coal, at Mank. by Art. for Feeder House 68			Reg. C-17
" 25 ✓	20 tons	Pea coal at Bridgeport by " for Dredge & Pug			Reg C-18
" 26 ✓	90 ft. 9/8"	Steel cable from Loco Shop by Art. for Dredge			Reg. C-15
" 28 ✓	3 pcs.	4" x 6" x 14 ft 848 M. from Lbr. yard. by " for Well floor Lock 68			Reg. C-18
" 28 ✓	2 "	2" x 6 x 18" ft. Reg. 36 F.B.M.	" " " " " "		" "
" 29 ✓	2	" 6 x 8 x 20 ft. 180' F.B.M.	car Reg. 134.88, Lock 68 Lock 64473		" "
" 29 ✓	3 "	" 18" 2+3 "	" " " " " "		" "

Nov.

Material Received in Dec., March, April, May, June, July & Aug. 1937 '38

DATE. Dec.	No. of.	CARGO.	CONSIGNMENT.			INSTRUCTIONS AT
			CHARACTER OF.	TO WHOM.	PORT OF	
10 ✓	3 Pcs 3" x 12" x 18' for S. H. S. 216' B.M. Frame	Easterlin Term'l. Lbr. Co., Wilmington Del.	\$36.50	"	"	Reg. C 19
10 ✓	7" " X 11" " 308" "	By Art. or Rdg. 21431. for Repairs Black Rock Dm	\$36.50	"	"	" "
10 ✓	65" " X 10 6" " 2730" "	"	\$36.25	"	"	" "
10 ✓	15" " X 5" " 300" "	"	\$36.50	"	"	" "
10 ✓	77" " 4" X 8" X 10 6" 2156"	"	\$36.25	"	"	" "
23 ✓	1 Pcs. 10" X 12" X 13' for S.H. 130" "	by Art. G. S.H. Lbr. yds. repairs	"	"	"	" "
23 ✓	1" 4 1/2" X 10" X 6' for New 28" "	" " "	"	"	"	" "
23 ✓	3" 4" X 9" X 20" "	180" "	" " "	"	"	" "

Jan + Feb. 1938 nothing received,

March	✓ 3 lbs. 20D wire nails by Freight Job no. 13-52349	Rentall House Oaks	Reg. C-2
" 29	✓ 2 gals. Steam Engine oil by Westmoreland 4.3.H. Dredge & Aug	"	C-1
" 29	✓ 5 lbs cotton waste	" " "	" "
" 29	✓ 3 gals. Black oil	" Water Power Feeders Stock 68	"

May nothing received.

July,
25 ✓ 3 Pcs 6x9x27 fir 365" B.M. from lbr. 2d. by Art Zuck no. 66 Reg C-4
25 ✓ 8 " 2" x 12" x 6 fir 96 " " " " " " " " " "

Material Received in August September 1938

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT.		INSTRUCTIONS AT PORT OF
			TO WHOM.	PORT OF	
Aug 22 ✓	Fir lbr. 6 $\frac{1}{2}$ "X6 $\frac{1}{2}$ "X16 ft. 1 pc. Fir lbr. 4 $\frac{1}{2}$ "X6 $\frac{1}{2}$ "X16 ft. 1 pc.	From Lbr. Yd. G.S.H. by Art. Plymouth creek Reg. 12 Rdg. 5132, Wadsworth			
" 22 ✓	" " 4 $\frac{1}{2}$ "X6 $\frac{1}{2}$ "X20 "	1 "	" "	" "	" "
" 22 ✓	" " " X16 "	1 "	" "	" "	" "
" 22 ✓	" " 3"X12"X18 "	7 "	" "	" "	" "
" 22 ✓	" " 2"X12"X16 "	7 "	" "	" "	" "
" 26 ✓	Bellar Cotta pipe 24"X36" long 10 pcs by Art from G.S.H. Liedermann Trunk. Reg. C-2				
" 30 ✓	Y.P. lbr. 6"X9"X16" 1 pc. by Art. from G.S.H. lbr. yd Bridge #64				" 10
" 30 ✓	Fir " 4"X12"X16" 10 "	" "	" "	65	" 10
" 30 ✓	" " 4 $\frac{1}{2}$ "X6 $\frac{1}{2}$ "X16" 2 "	" "	" "	63	" 10
" 30 ✓	" " 3 $\frac{1}{2}$ "X10 $\frac{1}{2}$ "X12" 8 "	" "	" "	64	" 10
" 31 ✓	" " 3 $\frac{1}{2}$ "X10 $\frac{1}{2}$ "X12" 8 "	" "	" "	34	" 7
" 31 ✓	Y.P. " 6"X8"X16" 1 "	" "	" "	38	" 6
" 31 ✓	Fir " 3 $\frac{1}{2}$ "X6 $\frac{1}{2}$ "X12" 5 "	" "	" "	31	" 7
" 31 ✓	" " " X12" 19 "	" "	" "	28	" 7
" 31 ✓	Y.P. " 6"X8"X16" 1 "	" "	" "	16	" 6
" 31 ✓	Oak " 3"X10"X8"6" 2 "	" "	" "	11	" 8
" 31 ✓	" " 2"X10"X3" 2 "	" "	" "	11	" 8
" 31 ✓	Y.P. " 6"X8"X16" Even depth 11 pc. " "	" "	" "	50	" 6
" 31 ✓	Oak " 10"X10"X4" 1 pc. " "	" "	" "	50	" 6
" 31 ✓	Fir " 4"X10"X16" 1 pc. " "	" "	" "	49	" 7
" 31 ✓	Y.P. " 6"X8"X16" 8 "	" "	" "	49	" 7
" 31 ✓	Fir " 3"X8"X3" 1 "	" "	" "	47	" 7
" 31 ✓	" " 4"X8"X16" 2 "	" "	" "	47	" 7
" 31 ✓	Y.P. " 6"X8"X16" 1 "	" "	" "	46	" 6
" 31 ✓	" " " X16" 2 "	" "	" "	42	" 2 6x4x5x3 6
" 31 ✓	Fir " 3"X10"X16" 3 "	" "	" "	42	" 2 7
" 31 ✓	" " 3 $\frac{1}{2}$ "X10 $\frac{1}{2}$ "X12" 14 "	" "	" "	42	" 2 7
" 31 ✓	" " 8"X12"X16" 8 $\frac{1}{2}$, 18 " " "	" "	" "	41	" 2 7
" 31 ✓	" " 8"X10"X6" 4 "	" "	" "	41	" 7
" 31 ✓	" " 6"X8"X14" 1 "	" "	" "	41	" 8
Sept. 14 ✓	Received at Conshohocken on Rdg. Car 27704 Art. charges \$9.18 4 P. lbr. 10"X3"X27 $\frac{1}{2}$ " 1 pc. from Port Reading Plymouth creek W.W.				
14 ✓	" " " X26 $\frac{1}{2}$ " 1 "	" "	" "	" "	
14 ✓	" " " X8" 4 "	" "	" "	" "	

Material Received in September October 1938.

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT PORT OF
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Sept. 16	Received at Birdsboro on C.N.J. No 17924, From Coal Storehouse, Reading, Pa.				
" 16	Fir S.I.S. 3" x 12" x 16', 18 Pcs.		Bridge no 4		
" 16	Received at Birdsboro, on Rdg Car no. 28854, From Port Reading,				
" 16	Y.P. 10" x 12" x 18"	1 pc.	Bridge no 4		Regd. 6
	✓ " 10" x 10" x 26' 3"	1 "	" "		" 6
	✓ " " x 18"	4 "	" "		" 6
	✓ " 6" x 8" x 18"	10 "	" "		" 6
	✓ " 4" x 8" x 18"	15 "	" "		" 7
	✓ " 10" x 12" x 16"	1 "	" 42		" 6
	✓ " 4" x 8" x 22"	8 "	" 42		" 7
	✓ " " x 20"	8 "	" 42		" 7
	✓ " " x 18"	4 "	" 42		" 7
	✓ " 10" x 12" x 16"	2 "	" 43		" 6
	✓ " 4" x 8" x 18"	3 "	" 43		" 7
	✓ " 10" x 12" x 16"	1 "	" 44		" 6
	✓ " 8" x 12" x 16"	1 "	" 44		" 6
	✓ " 10" x 12" x 26"	1 "	" 45		" 6
	✓ " 10" x 12" x 16"	1 "	" 47		" 6
	✓ " 10" " x 26' 3"	1 "	" 48		" 6
	✓ " 10" x 12" x 16"	1 "	" 48		" 6
	✓ " " x 22"	1 "	" 60		" 6
	✓ " 5" x 10" x 16"	2 "	" 61		" 7
	✓ " 10" x 12" x 16"	1 "	" 34		" 6
	✓ " 4" x 8" x 18"	7 "	" 34		" 7
	✓ " 10" x 12" x 14"	2 "	" 33		" 6
	✓ " 4" x 8" x 22"	1 "	" 11		" 7
Sept. 28th. 1938 at Birdsboro on Rdg Car no 21938, From Lumberyd & S. I. S.					
28	Rece. S.I.S. 3" x 12" x 24'	10 Pcs.	Bridge no 11		Regd. 8
	✓ Y.P. " " x 12'	1 "	" " 11		" "
	✓ " " " x 16	6 "	" " 33		" "
	✓ " " " x 16	32 "	" " 45		" "
	✓ " " 6x8x24	4 "	" " 45		" 6
	✓ " " " x 20	16 "	" " 45		" 6
	✓ " " 3x12" x 12'	12 "	" " 49		" 8
	✓ " " " x 18'	14 "	" " 50		" 8
	✓ " " " x 20'	26 "	" " 50		" 8
	✓ " " 6x8x18'	22 "	" " 50		" 6
	✓ " " " x 18'	9 "	" " 51		" 6
	✓ " " " x 20'	7 "	" " 51		" 6
	✓ " " 3" x 12" x 16'	35 "	" " 51		" 8
Oct. 15	Kerosene	1 bbl.	from L. S. H. Rdg. by Art. Feeder House 68,		
Oct. 31	Received on Rdg. Car 335750, 1 Car Bituminous coal				
	✓ for Feeder House Stock no. 68				

Material Received in November, Dec., Jan., 39 Feb. + Mar. 1938 39

Material Received in April, May, June, July
CARGO. CON

1939,

Material Received in July, August,

1939

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
July 18					
	✓ 36 Lincol ft fir 4x4" S4S.	54' 2,045		Class 30	Reg. 13
	✓ 1 Pcs Oak 8" x 12" x 2' 6"	16' .035			
	✓ " 3" x 12" x 2'	6			
	✓ 4" " 2" x 8" x 8'	42			
Aug.	✓ Lock House Black Rock vase, acct R.E. Dept Job. 13-63-201				
" 11	✓ 6 lbs. 8D wire nails, from G.S.H. by Pass, Price .03 class 45,				Reg. 16
	✓ 3" 6D				
" 14	Reed at Pottstown for Lock no 54+5 discount R.E. Dept Job. 13-63-360				
	✓ 3 Pcs. 8" x 10" Window Sights from G.S.H. by Pass " .05 E2				Reg. 15
" 14	✓ 2 lbs. 6D wire nails	" " " "	.03		" 16
" 14	✓ Reed at Birdsboro by Pass. for Lock House #5, acct R.E. Dept Job no. 13-63-284				
	✓ 165 Roof cement from G.S.H. Price .03				Reg. 18
" 19	✓ Reed at Tramberg on Reg. Car # 24771				
	✓ 8 Pcs fir 10" x 16" x 24" 2560' for Bege # 63, Price M 6003 class 30				Reg. 13
	✓ 1" 4. P. 8" x 10" x 16" 107' " " " ".043				" "
	✓ 1 Pcs fir 10" x 12" x 20' 260 " " #64 " ".043				" "
Aug. 24	✓ 2 gals. Black Oil, vinyl, Water Power Feeders, class 37, Price .09				" 17
	Reed by mes.				
Aug 25	Reed at Birdsboro on Reg. Car 28907 for Beges, 6+8 mile levels.				
	✓ 10 Pcs. 6" x 8" x 22' fir 880' Price 6003 + Surfacing acct. Class 30				Reg. 11
	✓ 10" " x 20" " 800' " " " " " "				" "
	✓ 10" " x 16" " 504' 640 " " " " " "				" "
	for Bridge no 30, Monocacy Road.				
	✓ { 7 Pcs. 6" x 8" x 18' fir 604 Price 6003 + Surfacing acct. class 30 ..				
	for Bridges no 43.				
	✓ { 7 Pcs. 4" x 8" x 18' 886 " " " " " "				
	✓ { 7" " 1.12" 224 " " " " " "				
	for Bridge no. 29,				
	✓ { 7 Pcs. 4" x 8" x 16' 299 " " " " " "				
	for Bridge # 32.				
Aug 26	✓ \$ 1/2 bag Limeoid for Lock House repairs acct R.E. Dept Job # 13-63-29.				
	by 34 to Pottstown class 3 Price .30				Reg. 16
Aug 26	Reed at Pottsville by Pass. for Lock House repairs acct R.E. Dept Job # 13-63-31				
	✓ 1 bag Limeoid Cement 45cts Price, class 3				Reg. 16
	✓ 1" Limeoid 30 " " " " " "				
Aug 25	Reed at Tramberg by Freight for repairs 5 Bridges.				
	125 lbs 600 Wire Nails price .03 class 45				Reg. 13
Aug 26	✓ 2 Grass Sod 1 for Lock 68+1 for Vincent Canal				" 17
" 30	✓ Sec 7th Paddock # 1207 repaired by users from G.S.H. Price .33 class 46+n 8				

Material Rec'd. in Sept. October, Nov.,

1939

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Sept. 6	✓ 2 Lbs. copper nails 1/4" long by mess for myk. water Pans. Feeder House Price .09 per lb.				Reg. 20
7	✓ Lock House #51 repairs acct. R.E. Dept. Job no. 13-53-298				
	✓ Fir 16x2" x 12" x 4' S.I.S. 1 pc. 8' B.M. by freight Price .045				Reg. 18
	✓ W.P. 1x4" x 12' S.4.S. " " "				" "
	✓ Rubberoid roofing 1/2" roll 4" " " " " 1.32				" "
7	✓ Watchman's House Black Rock Dam acct. R.E. Dept. Job no. 13-53-201.				
	✓ Fir - 2" 4 1/2" x 6 1/2" x 10' 3 pcs. 117.3 N. by Art. Price .043				Reg. 16
	✓ 20. P. 1/2" x 2" x 10'				" "
	✓ 78. 20. P. flooring 112' B.M. Oak. 7/8" x 3 1/2" x 3' 2 Pcs. " 0.52				" "
	✓ 24" cedar Shingles 100 " 1/3 square " 13.27				" "
	✓ 6 bags bar sand 100 lbs. " " " "				" "
10	✓ Lock House #54-5, acct. R.E. Dept. Job. no. 13-53-300				
	✓ 24" cedar Shingles 100 Pcs 1/3 sq. by Art. Price 13.27 Pers sq				" 10"
15	✓ Lock House #57 acct. R.E. Dept. Job. no. 13-53-291				
	✓ W.P. 1" x 6" x 4' 1 pc. 2' B.M. by Art. Price .052				" 15"
23	✓ 2 Sec Hd Grass Saddle from G.S.H. by Mess. 1 for Oaks Canal				Reg. 20.
15	✓ Lock House #33 repairs acct. R.E. Dept. Job. # 13-53-286				" 8.
	3 lbs. Roof Cement from G.S.H. by Pass. Price .03 class 47				Reg. 19.
Oct.					
9	✓ 3" corrugated Elbow for Down Spout. 1 pc. from G.S.H. by Mess. Lock House #63. Price 16.00. class 45; Reg. 22				
16	✓ Lock House #33 acct. R.E. Dept. Job. # 13-53-286. Paint House roof tiles				
30	✓ 2 1/2 qals. Brown Car Paint from G.S.H. by Mess. Price per gal. 9. class 47				Reg. 19
	✓ 2 Sec Hd. Car inspectors lanterns from G.S.H. by Mess. Price " class				"
30	✓ 2 lbs. 20 pr wire nails from G.S.H. by Pass. Price .03 Lb. class 45				Reg. 23
	Acct. R.E. Dept. Job. # 13-53-307				
Nov. 1	✓ 2 Pcs. 4. P. 2" x 12" x 10' \$67-2. M. by Art. Obs. Cr. 23869 Price .043 F.B.M. " 30				" 23
Nov. 1	Received at Birdsboro on Reg. car. 23869 from Ldt. 2/4. Rdg. Hauled by Swage.				
	✓ 8 Pcs. Oak S. I. S. 8" x 8" x 12' 288' Bridges Bricks Ldt. Price .041 class 30 Reg. 11				
	✓ 5 " " " 8" x 12" x 12' 180' " #11				
	✓ 12 " " " " x 12' 432 " #29				
	✓ 1 " " " 8" x 10" x 14' 80' " #29				
	✓ 3 " " " " x 16' 80' " #30				
	✓ 6 " " " 8" x 12" x 16' 288' " #30				
	✓ 1 " " " 8" x 10" x 16' 40' " #33				
	✓ 6 " " " 8" x 12" x 12' 216' " #35				
	✓ 1 " " " " " 86' " #36				
	✓ 5 " " " " " 180' " #37				
	✓ 2 " " " " x 14' 84' " #37				
	✓ 3 " " " 8" x 10" x 14' 70' " #37				
	✓ 8 " " " 8" x 12" x 12' 288' " #46				
Nov. 2	Received at Newburg on Reg. 27961 from G.S.H. Ldt. 2/4. Rdg. Hauled by Swage.				
	✓ 12 Pcs. Oak S. I. S. 8" x 12" x 2' 482' Bridge # 64 Price .041 class 30 Reg. 13.				
	✓ 2 " " " 8" x 6" x 12' 36' " 64				
	✓ 25 " " " 8" x 12" x 6' 1200' " 63				
	✓ 1 " " " 8" x 10" x 16' 40' " 63				
	✓ 10 " " " 8" x 12" x 14' 420' " 62				
	✓ 8 " " " 8" x 10" x 12' 240' " 62				
	✓ 35 " " " 8" x 12" x 16' 1680' " 57				
Nov. 4	✓ 12 reg. 12" stack Saw blades. by mess. Bridge repairs Price .04 Ea. class 45 Reg. 25				
" 6	✓ Watchman's house Black Rock Dam acct. R.E. Dept. Job. # 13-53-301, 1 bag plaster from G.S.H. by Pass. Price .60 class 3				18-41, 16
" 11	✓ Saw handle 77, 2L" Saw. from G.S.H. By mess Price .39 class 36				14

Material received in Nov. Dec., Jan., Feb.,

1939-40

DATE.	CARGO.		CONSIGNMENT.		INSTRUCTIONS AT
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	
Nov. 18th.	✓ 3 gals. ready mixed white Paint, from G.S.H. Slipped by Pass. to Bridgeport for Lock house #64	Price	Class		Reg. 21
18th.	✓ 1 gal. not Crated, from Gen Store House by mess, for acc't. Lock house #64, R.E. Dept. Job. # 13-53-289,			" 12	
Dec 14th	✓ Smoke Stack complete from Phila. by truck from Lock house #64, Bridgeport, Pa.				Reg. 21
Dec. 24, 23	✓ Rec'd at Birdsboro on Reading Car 6330, Oak. lbn. 2½" x 8" x 8' 2 Pcs. 53 BM. Lewis waste wire Fir " 2" x 10" x 16' 5" 160" "	" "	" "		Reg. 24
	✓ Oak. S.I.S. 3" x 10" x 16' 3" 120" "	Bridge #44			" "
	✓ " " 3" x 12" x 14" 3" 126" "	#43			" "
	✓ " " 3" x 12" x 12" 8" 288" "	#43			" "
	✓ " " 3" x 12" x 16" 8" 432" "	#30			" "
	✓ " " 3" x 10" x 16' 19" 760" "	#30			" "
Dec 23,	✓ 16 lbs. Putty, from G.S.H. by mess. Lock house #64,				Reg. 21.
" 26	✓ Snowpushers 3 Pcs. 1 for Hamburg Canal " Six mile Level " Eight " "				Reg. 26
" 26	✓ 1 Quart carbon tetrachloride fire extinguisher complete with charge Feeder house, lock #68, Muck. water power				Reg. 26
" 26	✓ 3 water buckets for fire protection use, " " " " "				" 26
Jan 6	✓ 4 Pcs. Spiking wall handles, from G.S.H. by mess, for bridge repairs class 80, Price 1023, Reg. 1,				
Feb. 16	✓ Fir S.I.S. 33 Pcs. 2" x 12" x 16' 1066 FB.M. from G.S.H. on Rdg. 6477, for Flat Rock Dam	Price 544	class 30		Reg. 2
" 17	✓ ½ Gal. Ready mixed white paint, outside use, from G.S.H. by mess, class 47, Price 85 per gal.	"	"	" 3	
	✓ account property protection,				
Mar. 21	✓ 2 Great American Saw files, from Genl. S.H. by mess, Charge-Bridge repairs				Reg. 4.
" 21	✓ 2 gals. ready mixed Brown Car Paint, from G.S.H. by mess Charge 1¼ Gal. Small boat 3½ " Small boat Lock #68				Reg. 4
April 19	✓ Rec'd at Phoenixville on Rdg. # 17503 A 10 bags Portland Cement from G.S.H. Freight for Pennypackers Cement 1500 lbs. Bar Sand " " " "	Price 45	class 3 - Reg. 5 to 6		
	✓ 3200 " crushed rock ¾ "	" "	" 70 " 5 to 6		
	✓ 500 " Bar Sand " " "	" "	" " 6		
	✓ 10.4. ½" crushed rock from Birdsboro on Rdg. 6500A " " "	" "	" " 6		
May 18th.	✓ 2 gals. Light Buff flat wall paint, G.S.H. by Art. for Lock house #64, Price 1.90 class 47, Reg. 7				
" 18	✓ 2 gals cream color " " " "	" "	1.50" "	" "	
" 31	✓ 4 bags cement, from G.S.H. by Art. for Pennypackers Gilbert, Price .45 class 9				Reg. 8
June 1	✓ 500 lbs Sand from Rdg Div. from McFarlane, for Pennypackers Gilbert -			class 9	Reg. 8.
" 11	✓ 25 lbs. 400 wire nails from G.S.H. by Pass. for Lock #69-70 Muck. Price .53			class 45	" 10 "
	✓ material slipped on rdg. car 18239,				
" 20	✓ 1Pc. 8" x 10" x 14" 2nd m. art. 4. P. 93-311. from G.S.H. by Art. for lock #7.	.06"	" 30	" 9	
" 20	✓ 7" x 12" x 16" fir S.I.S. 224 BM by Art from K. " " " " ".046				
" 20	✓ 4" 2" x 12" x 10 Oak 80" " " " " ".034				
" 20	✓ 16" 7/8" x 16 7/8" bolts from G.S.H. by Art.	".0762	" 4	" "	
" 20	✓ 16" 7/8" nuts square 2 1/2 lbs " " " " 10 lbs. " 11				

Material Received in June, July August, Sept., Oct., Nov.

1943

Material Received in Feb. March, April,

1941

DATE.	No. of.	CARGO.	CHARACTER OF.	CONSIGNMENT.				INSTRUCTIONS AT
				TO WHOM.	class	Price	PORT OF	
Feb 17	✓ 2 Pcs. Y.P. 10" X 12" X 26'	520' BM.	Bridge No. 51,	30	.042		Reg. 13	
	✓ 1 " " X 24"	240 "	" " 48					
	✓ 2 " " X 16"	320 "	" " 48					
	✓ 1 " " X 20"	200 "	" " 48					
	✓ 1 " " X 20"	200 "	" " 46					
	✓ 2 " " X 16"	320 "	" " 46					
	✓ 3 " " X 10"	300 "	" " 46					
	✓ 1 " " 8" X 10" X 16"	98 "	" " 46					15
	✓ 2 " " 3" X 10" X 20"	100 "	" " 46					14
	✓ 1 " " 3" X 8" X 20	40 "	" " 45					14
	✓ 1 " " 10" X 12" X 16"	160 "	" " 44					15
	✓ 1 " " X 10"	100 "	" " 44					13
	✓ 1 " " 6" X 8" X 16"	64 "	" " 44					13
	✓ 1 " " 4" X 8" X 4"	11 "	" " 44					14
	✓ 1 " " 10" X 12" X 20"	200 "	" " 43					13
	✓ 1 " " X 10"	100 "	" " 41					
	✓ 1 " " 10" X 10" X 10"	83 "	" " 41					
	✓ 1 " " 8" X 8" X 3"	16 "	" " 41					
	✓ 2 " " 12" X 12" X 16"	384 "	" " 39					
	✓ 3 " " X 16"	576 "	" " 37					
	✓ 1 " " 10" X 12" X 16"	160 "	" " 37					
	✓ 1 " " X 10"	100 "	" " 37					
	✓ 2 " " 6" X 12" X 18"	216 "	" " 37					
	✓ 1 " " 10" X 12" X 16"	160 "	" " 36					
	✓ 1 " " 4" X 8" X 21"	56 "	" " 36					14
	✓ 1 " " 6" X 8" X 16"	64 "	" " 33					13
	✓ 2 " " 10" X 10" X 14"	233 "	" " 30					1

Mar.

17	3 Corn brooms	1 for Hamburg Canal, 36 30cts.	1
		1 " Six Mile Level.	1
		1 " Eight "	1

March 24 Received at Birdsboro on Rdg 7149 for Bridge repairs.

Project	Serial	Store	House	Lumber	Iron	Wood	Class	Bridge No. 51,	30	16
✓ 3 Pcs. Oars. S.I.S. 3" X 12" X 16"	144' BM.									
✓ 3 " " X 12"	108 "									
✓ 3 " " 3" X 10" X 14"	105 "									
✓ 2 " " 3" X 12" X 12"	72 "									
✓ 9 " " X 12"	324 "									
✓ 9 " " X 20"	540 "									
✓ 13 " " X 16"	624 "									
✓ 1 " " Rough 3" X 10" X 20"	50 "									14
✓ 2 " " 3" X 8" X 20"	80 "									1
✓ 28 " " SIS 3" X 12" X 12"	828 "									16
NOT Recd.										
✓ 2 " " Y.P. Rough 4" X 8" X 20"	107 "									14
✓ 20 " " Oars. S.I.S. 3" X 12" X 12"	720 "									16
✓ 2 " " " X 14"	84 "									
✓ 6 " " " X 12"	216 "									
✓ 20 " " " X 12"	720 "									
✓ 3 " " Y.P. Rough 4" X 8" X 20"	160 "									14
✓ 10 " " Oars. S.I.S. 3" X 12" X 12"	360 "									16
✓ 11 " " " X 16"	528 "									
✓ 1 " " 3" X 10" X 16"	40 "									
✓ 3 " " 3" X 12" X 16"	144 "									
✓ 2 " " " X 12"	72 "									
✓ 5 " " 3" X 10" X 14"	175 "									
✓ 31 " " " 3" X 12" X 12"	1116 "									
✓ 24 " " " X 12"	864 "									
								Bridge Bricks Lock.		

April
March,
22

April 5	✓ 9 cap screw bolts $\frac{1}{2}$ " X 1 $\frac{3}{4}$ " from G.S.H. by Mess, Peeler House Lock 68	class	36	Ex. .02	Reg. 3
	✓ 8 Hexagon nuts $\frac{1}{2}$ " 5 lbs.	"	"	"	"
	✓ 2 eye handles	"	"	"	"
	✓ 2 Great American Saw files	"	"	"	"
	✓ 2 tapered Saw files	"	"	"	"
	✓ 1 gal. white Paint Penciline	"	"	"	"
	✓ 1 lg. handle Rd. Paint Shovel 27" H.d.	"	"	"	"
	✓ 1 tank, canal	"	"	"	"

Material Received in April, May and June,

1941.

DATE	No. of	CARGO.	CONSIGNMENT.		INSTRUCTIONS AT
			CHARACTER OF.	TO WHOM.	
April					
" 25		Received at Birdsboro on Rdg. 21891. Hauled by Steffel, 5 hrs. Heading,			
"	V 16	Pes. 6" x 8" x 20' 4. P. 1280' D.M.	Bridge No 11		Rdg. 16
"	V 8	" " x 12" " 384"	" "		
"	V 10	" " x 12" " 486"	" 38		
"	V 8	" 4" x 8" x 16" "	" 35		
"	V 16	" " x 18" " 768"	" 37		
"	V 5	" " x 18" " 240"	" 37		
"	V 7	" " x 16" " 299"	" 39		
"	V 7	" 6" x 8" x 20" "	" 44		
"	V 7	" " x 12" " 336"	" 44		
"	V 5	" " x 18" " 360"	" 45		
"	V 10	" " x 12" " 486"	" 45		
"	V 3	" " x 20" " 240"	" 46		
May 10	V 1	Smaller for grass scythe by mess Eight Mile level class 10 113.			Rdg. 4
" 17	V 1	Mass scythe 28 long "	" "	" "	.94.
" 27	V	Part of 8' board braces 39 C.S.			
"	56 (2)	Dressed 3' x 12" cogs for board braces			
"	V	gear 4 1/2 - 3 1/2" pitch for 10' wire, 4' diameter, 100 lbs	" 2		
" 27	44 (2)	Pine keeps for cogs.	" "	" "	" 2
June 13	V	50 lbs. 400 wine nails by Pass from G.S.H. Stock No 65	xss. 45A Price .03		" 6
" 13	V	48 pes 5/8" x 17" lg. bolts threaded. 3/4" I.D. "	" "	" "	" 2
" 13	V	780 7/8" dia. 5000-2 6Lbs. "	" "	" "	" .06
June 16	V	Received at Birdsboro on Rdg. 1280' S.			
"	V 1	10" x 12" x 20' 4. P. 200 F. 3 A. 11	Bridge No 46		13
"	V 4	" 6" x 8" x 20" 4. P. 1280' S. 1	" "		16
"	V 2	" " x 18" " " 142"	" "		16
"	V 3	" " x 16" " " 193"	" "		16
"	V 8	" 3" x 12" x 16' Oak. S.I.S. 384"	" "		16
"	V 1	" 10" x 12" x 20' 4. P. 200' "	" "		13
"	V 2	" 4" x 8" x 8" "	" "		16
"	V 6	" " x 20" "	" "		5
"	V 1	" " x 16" " rough. 43"	" "		
"	V 7	" 3" x 12" x 8" Oak. S.I.S. 336"	" "		
"	V 10	" " x 12" " " 360"	" "		
"	V 1	" 3" x 6" x 12" "	" "		
"	V 6	" 3" x 6" x 16' 4. P. 64.5. 144"	" "		
"	V 5	" 3" x 7" x 16" " S4S 53"	" "		
"	V 1	" 10" x 12" x 20" rough 200"	" Bridge No 35.		13
"	V 1	" 6" x 8" x 20" 4. P. 1280' S. 1	" No. 33.		16
"	V 1	" 10" x 8" x 20' 4. P. 1280' S. 1	" No. 11.		13
June 20	V	Rec'd. 1000' " " on Rdg. 1280.			
"	V	For P. 1280' S. 1	Bridge No 35. Canal Wash. Co. Inc.		
"	V 1	P2. 10" x 8" x 20' 4. P. 1280' S. 1	" "		20
"	V 2	" 10" x 8" x 10" "	" 167"		1
"	V 3	" 8" x 10" x 22" "	" 293"		
"	V 1	" " x 17" "	" 47"		
"	V 15	" 3" x 12" x 4' 6" Oak. S4S. 162"	" "		
"	V 1	" 3" x 6" x 12" "	" "		
"	V 4	" 3 1/2" x 3 1/2" x 4" "	" 16"		
"	V 5	" 2" x 12" x 6" " rough 60"	" "		
"	V 4	" 2" x 5" x 4" "	" 13"		
"	V 1	" 2" x 6" x 16" "	" 37"		

Material Received in July, Aug. Sept.

1941

DATE.	CARGO.		CONSIGNMENT.			INSTRUCTIONS AT Recd
	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	Class	
July 8	✓ 10 lbs. White Putty	from G.S.H. by Mess for Feeder House Lock 68,	47	.03		9
8	✓ 1 1/2 gal. Container	" outside Party "	" "	36	.08	9
16	✓ 10 gals. Ruberine paint,	"	" "	"	"	7
17	Rec'd on Rdg. 28238 at Phoenixville					
	✓ 1 Pc 8" x 8" x 20' 4.P. 107 from G.S.H. Phoenix Waterworks		80	.04		20
	✓ 1 " 8" x 12" x 8' Oak 24 "	" "	30	.029		20
19	✓ 2 gals ready mixed white paint " by Mess. Feederhouse Lock No 68					9
21	Rec'd at Bridgeport on Rdg. 28238 for Lock No 68					
	✓ 1 Pc. Oak 8" x 16" x 13' 8" " from G.S.H.					6
	✓ 5 " 6 1/2" x 10 1/2" x 10' 284 "					
	✓ 1 " 3" x 10" x 16' 40 "					
	✓ 1 " 2" x 12" x 16' 6 "					
	✓ 6 " " " "					
	✓ 11 " fir " 6 " " "					047
22	✓ 1 Pc Kiveria lighting, grass lamp		3		1.27	9
23	✓ Rec'd at Bridgeport on Rdg. 28238 for all 10 Stock houses 33 scds. 2" x 2" - fir S.D. 10560 per scd					.51
Aug. 4	✓ 5 gals. Brown paint		"	47	Price .93	7
Aug. 5	✓ 5 gals. Brown paint	for 10 Stock houses	"	45A.34	10.	
	✓ 100 ft. larch wood	Feederhouse 702	class 3	price per ft. .33	10	
	✓ 100 ft. larch wood		40 "	1.1	10	
	✓ 10 lbs. White Putty		47 "	" .03		
Sept. 1	✓ 3 lbs. nail gun	" for houses	20 "	.06		
5	✓ 5 lbs. 8 Drive nails	Stock house 59	45	.03	12	
11 5	✓ 10 lbs. "	" " "	20 "	.03	12	
11 7	✓ 3 gals. ready mixed Brown paint Lock houses Lock No. 68 Note 2nd batch next month (Request for account already received)					.93
Sept 2	Rec'd at Bridgeport on Rdg. 6707, for road st. 8 top gate					
	✓ 1 Pcs. W.P. 8" x 12" x 16 ft. 128 F.B.M.		class 80			Recd 13
	✓ 1 " 4.P. 6" x 12" x 12" 72 "		"			
	✓ 5 " 8" x 8" x 16" 727 "		"			
	For Lock No. 60 "		"			
	✓ 3 no. 2 1/2" x 6" x 6" 23 "	5.45	"			6
	✓ 2 " 4" x 5" x 14' 47 "	"	"			
	✓ 1 " " x 16" 27 "	"	"			
5	✓ by Freight at Phoenixville, for Stock house no 07 12 Bundles 18" cedar Shingles					12
9	By Mess.		class			
	✓ 1 coke broom for Feeder house Lock 68	80	.32			16
	✓ 1 Sifter for grass scythe Barnwell Canal	1C 46 1/2	.57			16
	✓ 2 Pcs. 5" tapered Saw files, Edge repairs	40 1/3	ea. 11			16
	✓ 2 " 10" Mill files	40 1/3	ea. 24			16
	✓ for repairs Stock house 36-7 John's 13-53-411					
	✓ 2 lbs. 20 Drive nails	45A	.03			15
	✓ 8 " 8 D " "	"	.03			15

DATE	CARGO.		CONSIGNMENT.				INSTRUCTIONS AT Requisition
	No. of.	CHARACTER OF.	TO WHOM,	PORT OF	PRICE		
Sept. 13	✓ 12 lbs. 8D Wire Nails from G.S.H. by Pass R.E. Dept. Job. 13-53-409.		Tuck House No. 36-7	Class 45A	.03		14
"	✓ 1 bag cement	" " "	"	3	.45		14
"	✓ 100 lbs Sand	" " "	"	3	.70		14
24	✓ 2 1/2 Gals. White Paint	" by Mess	"	47	.91		14
20	✓ 10 " Kerosene from G.S.H. by Pass Reg. 93027, Feeder House Lock 68	"	37		.05		11
24	✓ 1 car Bituminous Coal	" " 18187 " "	"				
26	✓ 6 - 1 1/4 gal cans Ruberoid asbestos asphalt paint; Tuck House No. 61	47		.40 per gal		9	
	Bronx Ruberoid Co. 500 Fifth Ave. New York, N.Y.						
24	✓ 100 Lbs seed oil, Bronx G.S.H. by mess Feeder House Lock 68	47		.87 per gal.		16	
Oct.							
6	Broad St. from G.S.H. Lbs. 16. with Herbert's auto, for Tuck House No. 36-7						
	✓ 1 Pcs. R.F. Job. 13-53-409						
	✓ 7 Pcs. 1" x 6" x 8' 21" 1" x 6" x 12" 62 F.B.M.		Class 30			Reg. 14	
	✓ 2 " 1" x 6" x 4' 20" 1" x 6" x 12" 62 F.B.M.		" 30			14	
11	✓ 1 1/2 Gals. 20 " Paint, P.O. cans, from G.S.H. by mess, Feeder House Lock 68	47	Class 30		.91	11	
14	Rec'd at Phoenixville Oct. 13 Reg. 405-A for Tuck House No. 59.						
	✓ 3 Pcs. Fir 1" x 6" x 12"	24 F.B.M.	Class 30			12	
	✓ 8 " " 1" x 6" x 16"	21	30			12	
14	Rec'd at R.F. Job. 13-53-409 for Tuck House No. 59, Job. 13-53-409 (JULY 13-53-4)						
	✓ 2 Pcs. 1" P. 4" x 8" x 9' 63"					15	
	✓ 1 " " 3" x 8" x 3' 6 "		30			15	
	✓ 4 " " 2" x 2" x 7' 28 "		30			15	
	✓ 26 lumens 1" 2" x 10" Y.P. 43' B.					15	
	✓ 2 Pcs. 1" P. 2" x 4" x 16" 21					15	
23	✓ Herbert got at G.S.H. Lbs. 70. P. 1" x 6" x 12" 62 F.B.M.						
	✓ 2 Pcs. Fir 2" x 12" x 7' 28 F.B.M. NO. 7101 to 12" 62 F.B.M.						
	✓ 2 " 1" x 8" x 6" W.P. S. 4 S. 8' F. 3 "						
	✓ 16 " 1" x 6" x 16" W.P. Reversing 42 F.						
28	Rec'd at Bridgeport Oct. 28 Reg. 405-A for Tuck House No. 65.						
	✓ 1 Pcs. 8" x 12" x 26" 780 F.B.M.		Class 30			15	
NOV. 5	Rec'd. at Oaks on Rdq. 6967. For Bridges tail of tuck No. 61						
	✓ 1 Pcs. 6" x 10" x 14" Y.P. 70 F.B.M.		Class 30			Reg. 18	
	✓ 1 " 4" x 10" x 16" " 53 "		"			18	
	✓ 2 " 4" x 8" x 16" " 85 "		"			18	
	✓ 1 " 4 1/2" x 6 1/2" x 20" " 49 "		"			18	
	✓ 24 " 3" x 12" x 12" Oak SIS. 864 "		"			18	
	✓ 17 " " x 10" " 9510 "		"			18	
	- 1 " 2" x 10" x 12" " Reg. 20 "		"			18	
NOV. 11	Rec'd. Oaks on Rdq. 29-53, for Bridges tail of tuck No. 61						
	✓ 9 Pcs. 2" P. 10" x 12" x 26" 780 F.B.M.		Class 30			Reg. 18	
	✓ 3 " " " x 25" 750 "		30			18	
	✓ 6 " " 8" x 10" x 20" 800 "		30			18	
	✓ 2 " 10" x 10" x 12" 200 "		30			18	
	✓ 1 bag 60 D Wire Nails by Pass.		45A			18	
NOV. 12	Rec'd. at G.S.H. by Pass for Lock House No. 57 Job. No. 13-53-411						
	✓ 5 Gals. Ready mixed white Paint	Class 47	Price 1.50 Reg 9				
NOV. 14	Rec'd. at local Store House Lbs. 44. Note to be put on Reg. next no. Hauled by Super truck						
	✓ 2 Pcs. Y.P. 3" x 10" x 20" 120 F.B.M. for Chestnut St. Bridge						
Nov. 26	✓ 2 Gals. Caulking compound, for feeder house lock No. 68					Reg. 17	
	Express charge \$1.50 Rec'd. from Gliddens Co. Rdq. Pa.						
Nov. 29	✓ Padlock from G.S.H. by mess. for Lock No. 67					19	
" 29	✓ 2 Spiking nail handles. " " Bridge repairs					19	

230

Material received in Dec. 4/

1941.

DATE



SCHUYLKILL ICE JAM PUTS WATER SUPPLY IN PERIL

Piles Up Fifteen Feet High, Threatening to Crush Fairmount Dam

A. American 1/14/18

Freezing Blasts Increase Suffering of Fuelless, Causing 2 Deaths

Schools Likely to Be Closed if Cold Continues; Warmer Wave Today

SCHUYLKILL ICE JAM OVERFLOWS FAIRMOUNT PARK DRIVES

An ice gorge fifteen feet high has jammed Fairmount dam, and unless immediate steps are taken to break the ice, a sudden thaw will bring a rush of water that would deprive West Philadelphia of its water supply.

East Park drive, which is covered with thick snow, and the Falls bridge is shown in the picture.

Cold Wave Broken

A RADUAL return to normal temperatures was forecast last night by the weather bureau in Washington, which predicted a rise of from 10 to 20 degrees in all affected states.

Death, suffering, railroad confusion and the endangering of the water supply of West Philadelphia thru an ice jam in the Schuylkill were faced by this city yesterday as the cold aftermath of the great Chicago blizzard swept over the Atlantic states.

Two persons died from cold exposure during the day. Trains from the west on the Pennsylvania Railroad arrived several hours to twenty-four hours late, but a resumption of the New York to Chicago schedule was made last night.

Suffering about the city in its almost fuelless state was intense, and rigorous steps are urged to alleviate it. Secretary William Dick, of the board of education, admitted that public schools might be forced to close for a time and extend their

otsville
otsville

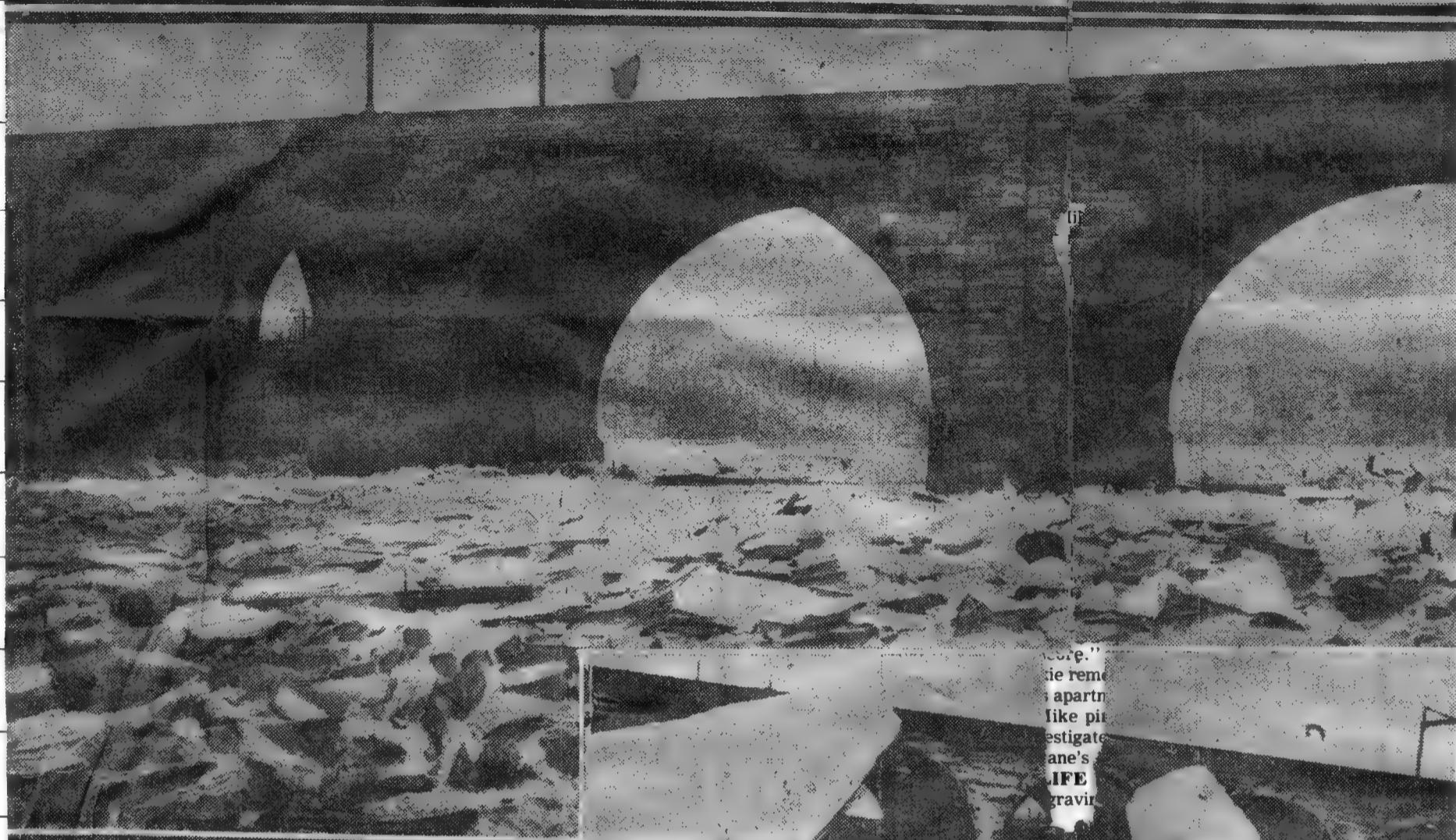
Clippings from Ruben Ritter's file

1/14/18 2:30 PM

1/14/18 2:30 PM

ICE MENACE TO FAIRMOUNT DAM HALTED AS COLD UNITES FLOES

Inquirer 1/16/10



... and the ice jam south to the Fairmount dam were battling last night against the fury of the Schuylkill for the safety of the city's water supply and the properties of scores of industrial plants and homes. Against this barrier, the river had thrown a great ice gorge extending up to Manayunk, from five to fifteen feet of thick, crunching, angry ice, whose thousands of tons gained greater and greater pressure as upper Schuylkill ice raced madly downstream to reinforce the defiance of nature to man-made obstacles such as bridges and the Fairmount dam. Carlton E. Davis, chief of the city water bureau, looked anxiously at the momentous attempts of the river to unloose its chaining yesterday afternoon.

"I am considering dynamiting it, tomorrow, when the ice is more solid," he said, "It looks bad."

Back in 1874 the Schuylkill dashed a similar gorge above Fairmount dam. For hours the battle raged. Dynamiting of the gorge at the dam was ordered by Mayor Stokley and was carried out by the city with the assistance of the Pennsylvania Railroad, whose president, Frank Gowen, urged the measure as a loophole out of a terrible calamity. Old rivermen said yesterday that the present gorge is worse than that of 1874 and more dangerous.

Jam Started Saturday

The swollen Schuylkill began its fierce onslaught on Saturday. With immense cakes of ice from a foot to two feet and a half thick, great logs, stumps and other victims of the upstream, the torrent battered the new coffer-dam constructed by Seeds & Dernam, a local contracting firm, for the establishment of a base for the new bridge which the Philadelphia and Reading Railway is to erect over the Schuylkill to replace the old Columbian bridge at Rockland. This coffer-dam had been completed and the contractors were about to pump out its inclosure. It was 120 feet long, 60 feet wide and 18 feet deep.

Moored tho it was, with thousands of tons of stone and railroad iron to the

Continued on Page Fifteen



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Port Clinton, Pa., 19549

ELPHIA, THURSDAY, JULY 19, 1934

Just above the Spring Garden Street Bridge

INSTRUCTIONS AT



Take a Look at Those Ten Pear Trees—As seen from the steps back of the lock tender's house. The camera is pointing across Fairmount Dam to Boathouse Row. At anchor in the canal are the motor boats: Margaret, Neptune, Mary-Ella and Winsagine. Opposite, a dredge, towed by the tug boat "Dolly," has been removing mud and silt from the waterway from Phoenixville to Philadelphia since spring. The small fenced-in enclosure is the lock tender's chicken yard.



House and Spillway—Operated by lock-tender George R. Schuck. It is tucked away and hidden from hikers on the West River Drive by a 20-foot wall.

DEAR DICK: Could you please

SELLING
SELLING?
SELLING?
SELLING?
SELLING?

SELLING
SELLING?
SELLING?
SELLING?
SELLING?

DATE.

No. of.

Unusual Views of the Old Schuylkill Canal



This Ancient Canal Is Still in Use and Being Dredged—Men and boys fish from the banks of the old tow-path where mules pulling coal barges used to run. On the opposite side, on what is called in canal-ese, berm bank, little gardens are planted between the pear trees, tools for which are kept in the small shanty under the tree. Note the Art Museum towering on Fairmount Hill and the city aquarium buildings low along the opposite river bank.

1, NO. 49 *Norristown Times*^M
Feb. 27, '18 INTERNAL

DANGER FROM RIVER NOW PAST, IT'S SAID

Stream Still High, However; Reading Dam Breaks; What Water Co. Men State

The high water of the Schuylkill is slowly receding, and those who should know say that all danger from this source hereabout is past. They claim that before the end of the week the stream will again be at its normal depth, although it is still nearly six feet higher than usual.

A break in the dam at Reading, yesterday, combined with the high water from the heavy rains of Monday night, was responsible for the swelling of the river to a considerable height yesterday. Much refuse was carried down streams and there were also several boats brought from a distance. Several of the rivermen say they secured some of this craft and are holding it for the owners. While some of the boat houses in this vicinity were slightly damaged, no serious consequences are reported and the industrial establishments along the stream report no ill results whatever.

The water is still rushing over the Swede street dam with great velocity, and it will be several days before the officials of the Norristown Water Company can determine the full extent of the damage done to the breast when the further break came, Monday afternoon, as was stated yesterday. It is feared, however, that this will be of a more serious nature than was first contemplated.

The water company officials announced, this morning, that with the present high water, they would have no trouble in keeping the reservoir well filled and the pumping is being continued night and day. Not until the water reaches normal will they be in a position to say what effect the new break in the dam will have on the borough's water supply. They promise that repairs will be made as soon as practicable.



LOOKING DOWN THE SCHUYLKILL
FROM THE AIR AT MANAYUNK.
The suburb lies to the left of the picture,
being on the north bank of the river.
In the center is the new Pennsylvania
Bridge. In the right distance is West
 Laurel Hill Cemetery. *Aero Service Corporation*

Reading Eagle - 8/4/22 EVERY

STATE OFFERS THREE METHODS FOR FLOOD CONTROL IN READING

SUGGESTS ENLARGEMENT OF RIVER CHANNEL OR BUILDING OF CONCRETE WALL OR LEVEE ALONG EAST BANK

In 1919 the Pennsylvania water supply commission sent to Mayor Filbert a report of a river and culm survey of the Schuylkill that had been made by state engineers, the contents of which are of particular interest at this time because of the revival of the subject due to the huge deposits of detritus that clog the channel of the river in and near Reading.

At that time Mayor Filbert acknowledged receipt of the report and later, on request of the city, the state made a topographic survey of the Schuylkill channel at a cost of more than \$3,000, and loaned it to the city.

The state has no appropriation for the work of deepening the channel. Such appropriations could be made only by special acts. If the Berks legislators had gotten busy at the time the report was first sent to Reading, four years ago, it is possible they might have procured appropriations from the state to carry on this work!

Thomas J. Lynch, secretary of the state water supply commission, when seen by the Eagle's Harrisburg correspondent, declared that this survey is still available.

Under the caption, "Suggestions for flood control plans for the Schuylkill River at Reading," the river and culm survey that was sent to Mayor Filbert Aug. 26, 1919, covered the subject constructively and exhaustively. Mr. Filbert replied on Sept. 2, 1919. The complete text of that report follows:

DRAINS 900 SQUARE MILES.

"The Schuylkill River, at Reading, has a drainage area of about 900 square miles, consisting largely of mountainous country. The mean annual rainfall is about 45 inches. More or less dependable high water marks have been preserved of the more important floods for more than 100 years.

"During recent years accurate records of flow have been kept, and from a knowledge of the characteristics of the river, estimates have been made of the discharges of the most important floods. The highest on record was that of September, 1850, the discharge of which is estimated to have been 80,000 cubic feet per second. In October, 1869, and on the last of February, 1902, floods occurred which reached within two feet of this extreme stage. The discharge on these occasions is estimated to have been about 70,000 cubic feet per second. The estimates of these early floods are probably much in error, but an examination of the topography of the watershed, and of the rainfall character-

istics of the region, lead us to believe that a flood might occur at Reading of 90,000 to 100,000 cubic feet per second, but that such floods would be very rare.

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EXPERIENCE MIGHT PROVE COSTLY.

"A flood like that of 1902 inundates all or parts of more than 30 city blocks, most of which are closely built up, and also covers many miles of main and side tracks of railroads within the city. A flood two or three feet higher than this, which may occur, would cause a great deal more damage. Quite generally a city in such a situation must actually go through the experience of a great flood before it will take account of its interest and be willing to pay for the necessary protection.

"In working out plans for flood prevention sometimes the problem is very much simplified by the fact that only one method of improvement is possible. In other cases several entirely feasible methods present themselves, any one of which can be followed at an expense that is fully justified.

"Floods on the Schuylkill River at Reading can be controlled by either of two or three methods, and careful and detailed surveys and studies will be required to determine finally which is best and least costly. Any method of flood control will be expensive, and may cost more than would seem at present to be justified by the interests involved.

THE TULPEHOCKEN CASE.

"Control by dams and retarding basins may be dismissed at once as impracticable in this case. Most of the best sites for dams and for storage areas are occupied by railroads. The Tulpehocken Creek, entering the Schuylkill from the west at Reading, has apparently excellent dam sites and storage areas that are not occupied by expensive improvements. This stream, doubtless, can be completely controlled by dams, but its drainage area is only 200-square miles, as compared with 900 square miles for the Schuylkill at Reading, so its control would only partially solve the problem. The control of this one stream by a dam and retarding basin probably would cost more than complete flood control for the city by other methods. Tulpehocken Creek would, however, furnish valuable water supply storage, if it should be needed, for industries in or below Reading. An examination of the map suggests a straightening of the river by cutting off two bends just below Reading. Such a straightening would eliminate the need for four large railroad bridges, but would require two very deep cuts, one of more than 100 feet. They would cost more than protection by other means, and would only partially solve the prob-

G.N.M.

Philadelphia, Monday, October 27, 1930

THE SCHUYLKILL CHANNEL

THE discovery of culm from the coal regions in the dredgings from the channel of the Schuylkill below the Fairmount Dam has led the Mayor to instruct the City Solicitor to ask the Attorney General to take such action as will prevent the coal operators from allowing the culm to get into the river.

Twenty-three years ago an action was brought in court to stop the practice. The coal operators, however, succeeded in making arrangements which at the time kept the culm from the water. The Supreme Court, instead of issuing the order sought, assessed the cost of the action on the operators and kept the case open, so that either party might apply on short notice for such relief as was desired.

That the culm continues to appear in the waters of the river suggests that further relief should be sought. The culm shoal at Norristown is said to be moving downstream at the rate of three miles a year. This means that it will not be many years before it reaches the Fairmount Dam and begins to be washed below the dam into the channel that the city must dredge in fulfillment of an agreement with the Federal Government. The Attorney General is expected to take such action as the facts justify.

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Port Clinton, Pa., 19549

Public Ledger

THURSDAY MORNING, APRIL 21, 1921

THE FAIRMOUNT DAM IS SAFE, CAVEN'S REPLY TO REPORTS

Director Says There Is No Danger of Break, Leaving West Philadelphia Without Water—City, However, Is to Plan Modern Concrete Structure

Frank H. Caven, Director of Public Works, in a statement yesterday allayed alarming reports that the Fairmount Dam in the Schuylkill River immediately above Spring Garden street bridge is in danger of breaking and leaving all of West Philadelphia without any water.

Director Caven said that while it is true the city has made repairs to the dam from time to time, the engineers who have examined the structure declare there is no danger of it breaking through.

"It is the intention of the city some day to replace the present structure with a modern concrete dam," the Director said. "The department is about to make some borings and we are preparing to make plans for a new dam but it is not with any idea there is the slightest danger of the present dam breaking."

The Director's statement was in reply to an article published in the monthly bulletin of the Civic Club, in which Theodore Justice, a member of the Fairmount Park Commission, stated the Water Bureau was in need of \$750,000 to build a concrete dam.

"The importance of a new dam will be realized," the article said, "when you consider that if this dam should break away, as it is liable to do at any time, West Philadelphia would be entirely without water. There is no way of supplying it with water from the east side of the river. Anyone can imagine the serious situation there to possibly more than a fourth of the population who are dependent entirely on water obtained from the Schuylkill River."

Other officials of the Public Works Department said the question of the safety of Fairmount dam was raised years ago.

Mr. Justice at the last meeting of the Park Commission asked whether the safety of the dam might not be affected if the Park Commission was to remove the accumulation of river silt which has backed up against the dam breast. Alan Corson, the chief engineer of the commission, explained that the safety of the dam would not be impaired.

Director Caven yesterday coincided with that opinion. He explained that if the accumulations of silt were removed it would probably lessen the strain on the dam.

Neglected Waterways.

Governor Smith, of New York, who has recommended to its Legislature that \$20,000,000 should be expended in completing the new barge canal and building grain elevators, has expressed his disappointment at the very slight use made of that most expensive waterway, and says that in a recent trip he saw but a half-dozen boats on the 90 miles of the Champlain section. This is an experience that can be duplicated on nearly any still surviving canal or navigable river, and is one of the curiosities of American life. Why do not our people make greater use of the interior waterways that have cost so much and on which bulky freight can be transported at considerably lower freight charges than on the railroads, and often in less time? The neglect of the Schuylkill Canal is a case in point.

It was only last year that, after the maintenance of a day line on the Chesapeake and Delaware Canal for over half a century between Philadelphia and Baltimore, it was abandoned for lack of traffic. The same fate befell the long-established Clyde Line between this city and New York. The upper Delaware, which formerly supplied business enough for two rival steamboat companies, now has only a summer passenger service, notwithstanding the unusual number of good-sized towns that line the stream. There is no longer any regular water communication for passengers between Philadelphia and the Delaware and New Jersey communities below Wilmington.

Foreign countries find that it is still profitable to utilize canals for the transportation of coarse and bulky freight, such as coal, wood, grain, stone, etc. It is only in America that this aversion to shipping by water seems to exist. This prejudice has laid a heavy burden upon the taxpayers of New York, who have expended much more than \$100,000,000 on the barge canal. No wonder Governor Smith is disappointed. Most people are who compare the existing means of water transportation with the very trifling advantage that is taken of them.

CANAL BOOMERS TO MEET IN PHOENIXVILLE MARCH 20

J. W. H. Glass, executive chairman of the Schuylkill Canal Improvement Association, has called the next conference of cities' and towns' delegates, members of the association, for Phoenixville on Saturday, March 20.

The Royersford Businessmen's Association has endorsed the canal improvement project. *Eagle 2/13/20*

CULM REMEDY UP TO STATE, SAYS MAYOR

SAYS TROUBLE HAS ITS
ORIGIN UP STREAM

Rdg Eagle 7/2/22

Mayor Stauffer said that no formal complaint had been made to the state water supply commission regarding the culm deposits in the Schuylkill River along Reading.

"The matter will be discussed in a Council conference before any official request is sent to Harrisburg for advice on the subject," he remarked.

The mayor feels that the state should provide a remedy higher up the stream where the trouble originates, rather than to expect the city to pay for removing the deposits.

"The present obstruction is especially noticeable below the new Bingaman street bridge, where the river is wider than at any other place about Reading," the official continued, "and there is no danger at the present time because the summer flow of water is small in comparison with the spring freshets."

Recalls Inspection Trip.
The mayor recalled an inspection trip which he made as a councilman along the Schuylkill about three years ago, from the southern city limits to the northern end at Flusheim, in company with Thomas J. Lynch, secretary of the state water supply commission, and one of its engineers.

"The inspection along the lower section below Penn street was easily accomplished," he said. "It was near the northern city limits, especially along the western bank, that we found soft spots where culm had collected over the low-lying portions. It made a marsh-like effect, which would not support the weight of one person's body."

"On several occasions members of the party had narrow escapes from falling into the soft culm deposits which, on the surface, had the appearance of being solid land. The inspection was for the purpose of determining the stream width deemed necessary by the state engineer to carry off the flood waters of the river area without overflowing other property."

MAY RE-OPEN CANAL

Navigation Co. Cleaning Out
Channel to Resume Traffic

The Schuylkill Navigation Co. has taken steps toward the reopening of the canal which parallels the Schuylkill river from Port Clinton to Philadelphia.

The company has sent a number of dredges along the water course for the purpose of removing the obstacles to traffic, and their activity has caused some speculation as to the plans of the navigation company.

While there has practically been no business on the waterway for several years, the recent activity on the part of commercial interests in the communities touched by the canal looking towards the resumption of water transportation, is believed to have prompted the present movement.

Incidentally, it is learned that an official of the company, a few days ago, made an inspection of conditions at Conshohocken, in connection with the building of the new river bridge at that point. One of the piers of the structure rests on the east side of the canal bank and as a result the waterway at that point is narrowed.

CONSI

WHOM.

TO AID CANAL REVIVAL

3/20/22
SCHUYLKILL WATERWAY BOOSTER AT HARRISBURG.

Harrisburg, March 30 (Special).—J. W. H. Glass, Reading manufacturer, who is interested in the reopening of the old Schuylkill Canal for the transportation of freight, conferred with James H. Craig, deputy secretary of internal affairs, who is interested in the subject of waterways. Secretary Craig and Mr. Glass have attended a number of waterways conventions together.

While here Mr. Glass consulted senators and members of the House concerning the resolution which it is planned to introduce next week. Senator James E. Norton will probably be asked to introduce the resolution, which will urge Congress to take favorable action on canal legislation now pending.

Mr. Glass will call a conference of the canal advocates to draft the resolution. No appropriation will be asked of the state. A bill is now before Congress asking an appropriation for the revival of canals, and if it receives favorable consideration a future session of the Assembly may be asked to appropriate money to aid the project.

"What we want of the Assembly now is not money, but its moral support," said Mr. Glass.

INSTRUCTIONS AT

320-Foot Channel Fixed.

According to the mayor's recollection, the state commission afterward fixed a compulsory width of 320 feet for the Schuylkill River channel along Reading. Following the inspection an order was issued by the commission to the Pennsylvania Railroad Co., requiring that it dig away a projecting land area at the railroad bridge crossing the Schuylkill opposite the foot of Spruce street. A large portion of the eastern bank, he said, was cut away to comply with the state's orders. At that time, the mayor added, the culm was not so evident in that section, although it had started to pile up at a few places.

A special dispatch from Harrisburg, printed in Thursday's Eagle, stated that Secretary Lynch declared that some time ago the commission sent a report to the city of Reading, informing Council what would have to be done for the protection of the river channel.

Search for Communication.

City Engineer Ulrich said that about four years ago he and Mayor Filbert made an inspection of the river and that the latter subsequently wrote to the state commission about the culm beds that were forming at various points. An engineer was sent here, Mr. Ulrich stated, and later recommendations were received. He could not recall what they were. The communication could not be found, but a search is being made for it.

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Port Clinton, Pa., 19549

LEVEE HARDLY FEASIBLE.

"A levee along the east bank of the river is not feasible unless the bed of the Schuylkill canal can be occupied because the canal and railroad tracks are too close to the river to allow levee construction between them. If the canal can be entirely abandoned, complete protection could be afforded the city by this means at a cost of perhaps half a million dollars, except that back water at the lower end might not be entirely prevented. If the canal cannot be entirely abandoned, it might be carried through the city in the bed of the river by the construction of two low dams fitted with locks, thus releasing the present canal for a levee location.

"The narrow strip of land between the canal and the river, while not wide enough for a levee, probably would be a suitable location for a concrete wall. The uncertainty in the cost of such a wall, aside from present fluctuations of construction costs in general, is because the character of the foundation is unknown, as are also the complications which would be encountered in occupying part of the canal right of way. Such a concrete wall would require a flood gate where the canal leaves the river in the upper part of the city, and probably another at the lower end of the city where the canal enters the river. The cost of flood protection by

means of such a wall might be three-quarters of a million dollars, but dependable estimates would require very careful investigation.

MAY COST A MILLION.

"Along part of the east bank of the river through the city there is room to construct a levee without interfering with canal or railroads. The improvement might consist of an earth levee where there is room and of a concrete wall where the canal is very close to the river bank. Probably a limited amount of channel improvement would enable such a combined improvement to be carried out with further economies.

"The comparative economy of these different methods can be determined only by comparisons following careful examinations of foundation material for concrete walls, of the possibility of disposing of excavated earth, of the possibility of displacing or moving the canal, of the cost of right of way, and of other items. It is probable that complete protection by any method will cost not less than a half million dollars, and it is quite probable, judging from a preliminary examination, that complete protection can be secured for not to exceed a million dollars."

FEASIBLE METHODS.

"Methods of flood control which appear to be feasible from an engineering viewpoint are:

"The enlargement of the river channel by excavation.

"The construction of a concrete wall along the east bank of the river.

"The construction of a levee along the east bank.

"A combination of the three methods mentioned above.

The enlargement of the river by excavating the channel would require the removal of perhaps 1,000,000 cubic yards of material in order to secure full protection.

The most feasible method for doing this work probably would be excavation by means of dragline machines of the revolving type, loading the material on cars and transporting it to some place where it could be dumped. The cost would depend largely upon the difficulty of finding suitable places for wasting the excavated material, upon the character of the soil or rock excavated, and upon interference with existing improvements. These and general construction costs are so difficult to determine in this case that the cost per yard cannot be estimated without careful investigation. It probably would be between 60 cents and a dollar per cubic yard. Among objections to this plan would be the possible high cost of maintaining the excavated channel due to silting or caving of banks, the possibility of undermining bridge foundations and possible interference with existing dams.

One important advantage of protection by channel excavation is the fact that local drainage would not be interrupted, and that a partial improvement might be carried out without danger of failure such as would follow the overtopping of

DECEMBER 8, 1919

ORGANIZE TO REVIVE CANAL TO TIDEWATER

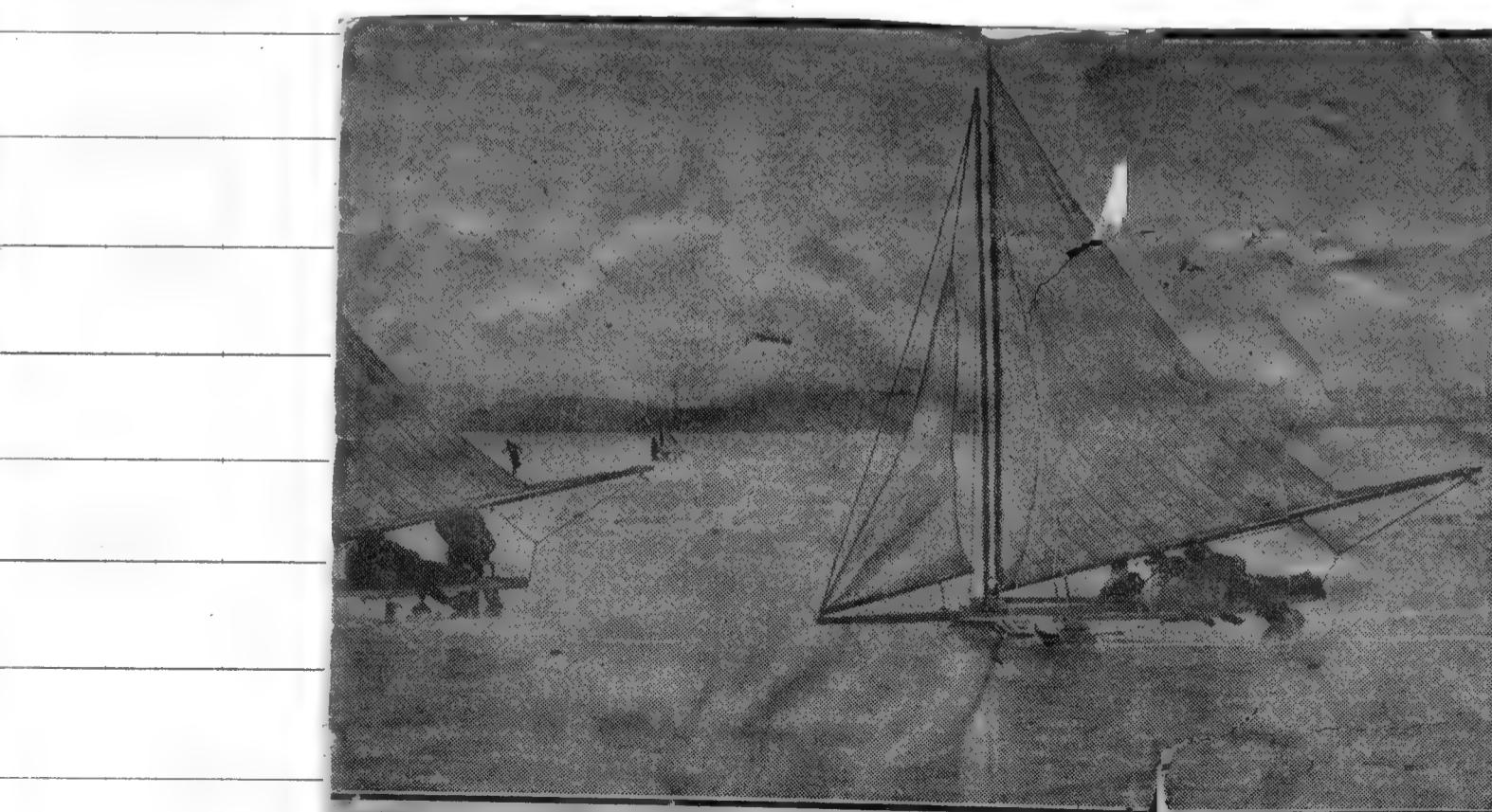
READING AND POTTSVILLE MEN AT WASHINGTON BOOST PROJECT

Washington, Dec. 8 (Special).—At a meeting here today of delegates from communities along the Schuylkill River attending the inland waterways convention, a permanent organization, to be known as the Schuylkill Canal Improvement Association, was formed and a resolution adopted and presented to the rivers and harbors committee of the House of Representatives, urging the opening of the Schuylkill canal from Pottsville to tidewater for the hauling of freight, particularly of coal. Officers of the new association elected were J. H. Zerbe, Pottsville, president; J. W. H. Glass, Reading, first vice president; E. A. Berkley, Phoenixville, second vice president; and W. L. Binder, Pottstown, secretary-treasurer.

Mayor-elect Stauffer, of Reading, attended the meeting. It was decided that when the delegates return to Pennsylvania, organization of the associations shall be continued in all the communities interested. The resolution presented to the House committee reads as follows:

"To the committee on rivers and harbors, House Office Building, Washington, gentlemen:

"Whereas, Recognizing the importance of opening up the Schuylkill canal from Pottsville to tidewater for the hauling of freight and particularly coal, affording a direct route of transportation from the mines to the barges of our outgoing vessels, thereby eliminating the re-handling necessitated by transportation by rail; and



ICE YACHTS WHICH RACED ON THE DELAWARE AT RIVERTON

for winter sports on the Delaware. Among those who were out on ice boats yesterday were Mrs. Biddle Frishmuth, William Hendrickson, Brinton Thomas, Biddle Frishmuth, John Douglas Clarke and Balston Biddle. The protracted cold winter sport than ever before, and the upper Delaware was "alive" with devotees.

INVENTION SAVES PULVERIZED COAL

TO V

Holland Method Expected to Save Companies Vast Sums in Reclaiming Fuel

State Also Will Benefit by Having Rivers Free of Dirt and Sediment

Special to The Inquirer.

SCRANTON, Pa., Aug. 16.—A process, which it is believed will increase the earnings of the coal companies of the anthracite region millions of dollars yearly, and which it is thought will also be a benefit to the State of Pennsylvania, was successfully tested today at the Old Forge Colliery of the Pennsylvania Coal Company, at Old Forge, near this city.

The process, invented by Charles E. Holland, of New York, not only recovers and reclaims coal from waters that go into the creeks in draining coal mining districts, but it also aids in clarifying rivers and streams and prevents their pollution from the colliery source.

One of the most important features of the Holland process is that the water flowing from each colliery will be clarified or in other words, it is discharged to the stream from the colliery fully clear. The water is free from all solids that are held in suspension.

For years the streams of Pennsylvania have been polluted and filled with water draining the coal mining companies' properties and by the Holland method it is claimed that the water pouring out into these streams will be clarified and benefit the State and at the same time it will save the pulverized coal that has been going out in the wash water from the mines.

The tests of the Holland patented process were made Monday and today and finished this evening. These tests, which proved most satisfactory, were made in the presence of Francis E. Daniels, assistant engineer of the Pennsylvania Department of Health, and W. L. Long, of Division of Electric Chemistry of the Pennsylvania Department of Health, with headquarters at Harrisburg, and officials of the Pennsylvania Coal Company.

Following the tests, which continued for two days, the State engineers started back for Harrisburg, where they are to make a report immediately to Dr. Edward Martin, head of the State Health Department, who in turn is to lay the matter before Governor Sproul.

Because of the success of the tests made under the Holland patent, the precipitating of coal mines by the electrolytic invention, it is expected that coal companies throughout the anthracite belt will soon begin installing the Holland apparatus.

PLAN NEW FAIRMOUNT DAM

Structure of Concrete Will Replace Dangerous Wooden Frame.

A contract has been awarded for 10 borings for Fairmount Dam, Carleton E. Davis, chief of the Water Bureau, announced on Saturday. This is the first step looking toward the construction of a permanent masonry dam across the Schuylkill River at this point.

Fairmount Dam creates the pool from which the entire water supply of West Philadelphia is drawn and a large portion of the supply for the central part of the city west of Broad street and south of Hunting Park avenue. Any accident to Fairmount Dam or any damage to the structure from ice or floods might result in the lowering of the water in Fairmount pool to such an extent that the pumping stations located along its banks would be put out of commission and the districts depending upon these pumping stations for their supply would be out of water.

Before designs for a masonry dam can be made, or a safe estimate of the cost of the structure determined, it is necessary to know definitely the elevation at which ledge rock lies in the bed of the river, and the character and nature of this rock. The test borings about to be made are what are technically termed "core borings;" that is, drills used in penetrating the rock to cut out a ring and allow the removal of the circular interior core of the actual rock. This core when lifted out shows the nature of the rock, whether it is sound or disintegrated, whether it has seams through which water may penetrate, or whether it is solid and water-tight.

The permanent masonry dam will be constructed so as to prevent leakage through the rock beneath the dam as well as to prevent leakage through the actual structure of the dam itself. At the present time the existing timber crib rock-fill dam at Fairmount is leaking excessively. Estimates have been made that not less than 50,000,000 gallons a day of water are escaping between the logs and through the loose rock-filling of the existing old structure. In times of excessive drought such as occurred in May and June last, the loss of this amount of water a day is serious, and if allowed to continue or increase, might create a shortage at the pumping stations.

Fairmount Dam has an interesting history. The original dam at the present site was built about 1821. This dam lasted over 20 years, and in 1842 and 1843 it was necessary to rebuild the dam from low tide up. After another period of about 20 years extensive repairs were necessary, and in 1865 a reinforcing crib of logs and rock was sunk downstream from the first structure. This was a temporary expedient only, and in 1872 an entire new dam was built downstream from the 1820 dam. This downstream dam, built in 1872, is the one that is seen at the present time. The remains of the original 1820 dam lie submerged upstream in the Fairmount pool.

A great flood in 1904 washed away a part of this 1872 dam and the entire structure was practically rebuilt in 1905. The dam was again damaged from ice and high water in the winter of 1917 and 1918, and in the fall of 1918 additional extensions and repairs were made.

CANAL PLANS DON'T APPEAL MUCH HERE

DATE.

Localites Could Not Make
Much Use of Water

Transportation

Norristown Times 10/12/20

Conshohocken firms having a great amount of freight shipment to and from industries in this borough, are not much interested in the efforts being made by representatives of the committee promoting the Schuylkill canal navigation looking towards the guarantee of support essential to assure the undertaking attending the placing of this waterway again in operation for traffic.

The Schuylkill Navigation Committee, in testing the sentiment of the local shippers of bulky freight, found that the firms here are, in the main, handling a line that must be placed directly on cars which can be taken as near to the place of destination as is possible. They would have to go to more expense, in most instances, in order to make use of the boats for such freight as is destined for Philadelphia.

The only encouragement the local firms can give to the proposed freight traffic over the canal is in the matter of receiving anthracite coal, whose use is limited. The big mills use the bituminous product, which comes from points beyond the reach of the headwaters of the canal.

To Conshohockenites, the main source of interest in the operation of the canal, it was pointed out to the committee is the mercantile trade.

MERCHANTS sounded on the matter stated that, while they were willing to co-operate as far as possible in having shipments from up-river points scheduled by way of the canal transportation service if re-established, there is but a limited amount of such freight that could be diverted even at the busiest season.

HOPE TO INTEREST U. S. IN CANAL

(Continued from First Page)

vides for the construction and improvement of waterways, for the purpose of relieving, increasing, and improving the transportation facilities of the nation, as well as to give employment to a large number of our discharged soldiers and others.

The appropriation called for is \$100,000 annually for the next years and provides for appropriations on projects already approved by U. S. Engineers.

This appropriation includes a large number of river improvements, including Schuylkill Navigation Canal \$1,400,000 annually for five years; which canal extends from Pottsville in the coal region 104 miles to the junction of the Schuylkill and Delaware rivers at Philadelphia.

The bill calls for the handling of these improvements by U. S. Engineers and the Secretary of War, and that all these waterways shall be under control of the War Department.

It will be seen by the above the the Schuylkill Canal project is at least on the map, and it is evident that if the people of this section will give the matter proper support that the Government will eventually be induced to provide waterways transportation facility between the anthracite coal mines and the main arteries of the Intra Coastal Waterways system that will be connected and in operation in the no distant future between the New England States and the South and the West paralleling the oceans so as to give the U. S. Navy inside water transportation in the event of war.

The Schuylkill Canal and the Lehigh Canal projects have the endorsement of the state authorities, and the hearty co-operation of the officials of the larger canal projects who realize how inadequate the railroad transportation systems were for the transportation of coal during the recent war, without reckoning the great commercial advantages that would accrue to the towns and industries connected therewith.

All communications bearing on Schuylkill Canal Improvement matters should be addressed to J. W. H. Glass, Chairman of the

Norristown (Daily) Times,
March 28, 1921.

HOPE TO INTEREST U. S. IN CANAL

Efforts of Schuylkill Improvement Assoc'n Men

Along This Line

ADVOCATES IN CONGRESS

To the Editor of The Times:

The following information just received from Washington, showing the present status of the efforts of the Schuylkill Canal Improvement Association to have the C. S. Government take charge of the rebuilding, rehabilitation and reopening of the Schuylkill Canal for effective commercial and Government operation in the distant future, may be of interest to your many readers:

The effort of the Schuylkill Canal Improvement Association whose active members largely come from Conshohocken, Norristown, Phoenixville, Royersford, Pottstown, Reading, Leesport, Hamburg, Schuylkill Haven and Pottsville, for the purpose of bringing about the Government control and reopening of the Schuylkill Canal, between Pottsville and Philadelphia, has resulted in having the Schuylkill Canal Improvements included in the Inland Waterways new bill that is to go before Congress this year.

The official title is the Mississippi to Atlantic Inland Waterways project, and the bill pro-

3.
Executive Committee, Reading, Pa.; W. K. Binder, Secretary, Pottstown, Pa.; Gilbert Rodman Fox, Esq., Solicitor, Norristown; E. A. Barkley, Treasurer, Phoenixville, and J. H. Zerbey, President, Pottsville, Pa.

This project has the hearty endorsement of Congressman Butler of Chester, Congressman Watson of the Norristown District, the Congressman from the Reading-Lehigh District and Congressman Reber of the Schuylkill District. GILBERT R. FOX, Norristown, March 28, 1921.

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Port Clinton, Pa., 19549

MINE WASTE, EXPERT SAYS, POLLUTES STATE STREAMS

Heavy Losses Caused by Acids Carried Into the Waters—Great Numbers of Fish Destroyed; Navigation Hampered; Harm Done at All Points

Public Ledger

Gross pollution of the streams of Pennsylvania, including the Schuylkill, were charged last night to the industries of the state by C. A. Emerson, Jr., of Harrisburg, chief engineer of the State Department of Health. To return the waterways to a condition of reasonable cleanliness, the speaker said, would be a task of great proportions.

Mr. Emerson spoke in the Franklin Institute.

"The most serious source of stream pollution in Pennsylvania is that due to the discharge of coal-mine drainage," Mr. Emerson said.

"It has been estimated that more than 850,000,000 gallons of water are pumped each day from anthracite mines and 600,000,000 gallons daily from bituminous mines. The total volume of this mine waste is about four times the volume of water furnished each day by the Philadelphia water works. The total quantity of free acid and acid salts carried by those mine wastes and by the discharge from the washeries has been estimated at more than 4000 tons each day."

Mr. Emerson said that some of the results of the waste from the mine fields were the blocking of sewer outlets and the increasing of flood damage, destruction of fish life and increasing the hardness of the water, and thereby

3-7-21

adding to the expense of maintaining at least ninety-six water works in the state. All this has increased the cost of navigation and industries in the Pittsburgh district by \$10,000,000 annually.

No exact figures are available of the tonnage of the coal discharged into streams flowing from the anthracite regions, Mr. Emerson said, but the approximate figures, he said, are startling.

"The excess in coal taken from the ground over that marketed in the last sixty years has been estimated to be more than 500,000,000 tons," said the speaker. "That excess was allowed either to escape into the streams or was placed in great storage, or culm banks near the mines. As the contents of the culm banks is believed to have been approximately 125,000,000 tons, we are forced to consider that the difference between these figures, or 375,000,000 tons, represents the quantity of coal which has escaped into the streams from the mine fields. It is not a complete economic loss, as much of the coal has been deposited along the banks of streams and has in turn been reclaimed."

The Morris Canal

December 1, 1922.

Final Disposition of New Jersey's Old Time Enterprise.

REPORTED settlement of the Morris Canal question will remove from New Jersey politics a cause of scandal and agitation which has been chronic for a generation. The terms wrung from the Lehigh Valley Railroad by the commission created by last spring's Legislature are so favorable, compared with previous tenders, that there will be general acquiescence in the compromise, which is binding on the State without legislative or Executive confirmation.

The railroad company, which heretofore maintained that its leasehold, running for one hundred years from 1874, was actually in perpetuity, has abandoned that claim. In lieu of the reversionary rights to the entire property in 1974, the State gets real estate, including the canal bed from Newark to Phillipsburg and a portion of the terminal property in Jersey City, and Bayonne, water rights and cash to the total estimated value of \$7,640,000, while the company secures title to about 700 feet of valuable water front at Paulus Hook and a strip of the route to Phillipsburg.

The bargain is alike a good one for the State, which did not venture a cent in the construction of the canal, almost a century ago, and for the railroad, which, while winning a considerable part of the realty it prizes, also gets rid of an annual deficit of \$175,000, incurred in upkeep. Unused throughout the greater part of its length for forty years, the obliterating of the ditch will not be felt, and the compromise will doubtless meet objection only among those who prefer two birds in the bush to one in the hand.

The survey of the Morris Canal was authorized by an act of the New Jersey Legislature of 1822, and active construction was begun three years later. By August, 1831, it was completed from Phillipsburg to the Passaic river, in Newark, at a cost of about \$2,000,000, although the original estimate was \$81,000, public works having then the same habit of expansion as at the present time. Before business could be developed to a profitable basis, the Delaware and Raritan Canal and Banking Company, and Louis Focht, a member of the canal commission,

MORRIS CANAL GOES BACK

Agreement for Return to State is Signed After 24 Years' Strife.

Jersey City, N. J., Dec. 1.—The signing of the Morris Canal agreement by the Canal Commission and President Loomis, of the Lehigh Valley Railroad, today marked the close of a 24 year fight between the State and the railroad on the abandonment of the canal.

Three copies of the agreement were signed. One will be deposited in the archives of the State Department of Conservation at Trenton, one will be retained by the commission and the third goes to the railroad. The copy of the agreement which will be filed in Trenton will be delivered to the department by Jerome T. Congleton, corporation counsel of Newark; D. G. Baird, secretary of the Lehigh Valley Railroad and the Morris Canal and Banking Company, and Louis Focht, a member of the canal commission.

THE FUTURE OF THE CANAL

Rdg. Eagle 1/22/20
MATTER CONSIDERED AT
CONVENTION HERE

A number of plans for future activities, to cover a broader scope than was at first planned, were discussed at the closing sessions of the meeting of the Schuylkill Canal Improvement Association held at The Berkshire.

The afternoon was given over mainly to talks by delegates on matters pertaining to plans that could be followed in restoring the canal to navigation, trade benefits derived from inland waterways conducted along businesslike lines, parts that could be played by developed canals in reducing the high cost of living, engineering projects as they affect canal construction, legislation, etc.

NEXT SESSION MARCH 22.

It was decided to hold the next meeting at Phoenixville on Monday, March 22. E. A. Barkley and William Ellis, Phoenixville, and J. W. H. Glass, Reading, were appointed a convention committee to arrange the plans. W. L. Binder was appointed secretary of a committee on resolutions, calling on the authorities at Washington for the purpose of enlisting aid from the government for the proposed plans of rebuilding the canal.

J. H. Zerbe, of Pottsville, presided. Messrs. Glass, Zerbe and Binder were appointed a publicity committee.

An open forum was held in the evening, followed by a dinner at 6 o'clock. Mr. Zerbe introduced the speakers. The discussions were varied and touched on almost every angle of the subject.

ADmits HE IS A "CRANK."

"The high cost of living which is being felt nowadays is made up largely of the high cost of transportation," said Burd S. Patterson, of Pittsburgh, who, as he stated, prides himself as being a "crank" for years on all sorts of canal projects. Mr. Patterson furnished interesting data concerning the amount of tonnage carried over inland waterways during the early canal days compared to the present. He said that living costs would not show much of a drop until more adequate transportation facilities are fostered. He furnished proof that more than \$10,000,000 in freight charges were saved last year by resorting to traffic on the Monongahela River canal. He gave interesting historical facts concerning the Schuylkill Navigation Co. since it was chartered in 1815.

A CO-OPERATIVE MATTER.

Mayor Stauffer thought that the project of rebuilding the canal should be regarded in a co-operative light and not as one to be treated as a controversy with the railroads. He said he was convinced that the railroads in the Schuylkill Valley have now reached such a point of congestion that only a broad reconstruction policy will bring about better transportation facilities. He said:

"The association should follow a policy of reconstruction in order to make the canal one of the leading cargo-carrying waterways in this part of the country." He stated it was perfectly logical on the part of those backing the project to look for support from every businessman in those communities which would be affected by the proposed canal improvements.

CAUSE FOR REPROACH.

"The railroads are in such a state now that they will never again be able to meet the transportation problems. The methods of many of them during the past have brought public reproach upon them." The foregoing were among some of the assertions made by James H. Craig, secretary of internal affairs, Harrisburg, in explaining why the reopening and building of canals should be regarded seriously. Many railroads he declared have little room for expansion now, as they are unable to realize enough from their rates to conduct their lines profitably. He agreed with Mr. Stauffer that there was no reason to antagonize the railroads while pushing the waterways project. He said:

TIME TO LOOK AHEAD.

"The time has arrived when we should awake and agitate waterway improvements. Pennsylvanians should cast their eyes on the future mainly for the benefit of the coming generations, who would regard our improved resources as most valuable legacies."

Mr. Zerbe remarked that the project was not for those interested in personal graft. "We have no axes to grind, as we are all actuated by one motive, the improvement of the canal for everyone," he remarked.

E. A. Barkley, of Phoenixville, second vice president of the association, told of the difficulties experienced in coaling the water works at Phoenixville since the Reading Railway Co. abandoned the shipment of coal by canal.

J. W. Moyer, of Pottsville, went into details of the number of physical obstacles to be overcome in rebuilding the canal. "If we want a canal we must have a modern one," he said. He said the rebuilding of the waterway would mean much in facilitating shipments of coal to the South. The boats, he said, could act as cargo carriers both ways, going south as coal carriers and returning lumber-laden.

ITEMEN

GETS COPY OF BILL RELATIVE TO CANAL

Times 1/25/20
Gilbert R. Fox Receives Same From

Congressman Watson.

Attorney Gilbert R. Fox, as chairman of the Legislative Committee of the Schuylkill Canal Improvement Company, today received from Congressman Watson a copy of House Bill No. 13206 which the local representative has introduced in Congress, in furtherance of the efforts of the association to have the local canal improved so that heavy freight may be carried thereon as in the days of yore.

This bill authorizes "and directs the Secretary of War to cause a survey to be made of the Schuylkill Canal," and reads as follows:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled, that for the purpose of increasing and improving transportation facilities of the Nation, the sum of \$10,000 be, and the same is hereby appropriated, out of the moneys in the treasury not otherwise appropriated, to be immediately available, and to be expended under the direction of the Secretary of War, who shall cause a survey to be made of the Schuylkill Canal, in the State of Pennsylvania, under the supervision of the Chief of Engineers to determine the advisability and cost to the United States to reconstruct it, and the Secretary of War shall report to Congress the approximate cost of reconstruction as will readily accommodate barges drawing at least ten feet of water."

SPEAKER DIFFERS

Wellington M. Bertolet, city solicitor, differed with Mr. Moyer to some extent. He said he did not believe that much could be saved by transporting coal alone south by water, as many of the southern states are small consumers of anthracite. "We all want a canal first, if it is practical as an engineering proposition, and second, if it is an economic proposition. History has shown us that canals have died when railroads were developing." He suggested that a complete engineering survey be made in order to ascertain physical obstacles to be overcome, the cost, etc., before deciding on permanent plans for rebuilding the canal.

Remarks were made by W. U. Barr, Jere H. Barr and H. Y. Stoner, this city; G. W. Lehman, Harrisburg; and others.

A letter was read from Congressman Dewalt endorsing the movement.

THOSE PRESENT.

Among those who played an active part in the affair were:

James H. Craig, secretary of internal affairs, Harrisburg; George W. Lehman, engineer, department of internal affairs, Harrisburg; Burd L. Patterson, secretary of Lake Erie and Ohio River Canal Board, Pittsburgh; Joseph W. Moyer, Pottsville; M. H. Spicker, Pottsville; Joseph H. Zerbe, president of Schuylkill Canal and Improvement Association and editor and proprietor of Pottsville Republican, Pottsville; W. H. Barbour, Chamber of Commerce, Pottsville; Charles D. Buckley, representing borough council, Hamburg; J. Edward Miller, Hamburg; I. S. Lenhart, Hamburg; O. H. Lincoln, Pottstown; W. L. Binder, representing Rotary Club and Businessmen's Association, Pottstown; A. W. Urner, Spring City; H. R. Black, representing Businessmen's Association, Royersford; H. E. Campbell, Royersford; Gilbert R. Fox, member of borough council, Norristown; Harry P. Hiltner, borough treasurer, Norristown; Norman Matthias, president of borough council, Norristown; Richard H. Bate, representing council of Conshohocken; William Ellis, Phoenixville; E. A. Barkley, Phoenixville; Mayor John K. Stauffer, Wellington; M. Bertolet, city solicitor; Councilman Edward J. Hunter, D. Elmendorf, W. B. Yegger and William J. Smith, City Clerk Charles Marks, Rev. Dr. Scott R. Wagner, Rev. William B. Smith, Rev. H. Y. Stoner, W. U. Barr, T. M. Lettach, Thomas C. Seidel, Jere H. Barr, J. W. Klein, Fred S. Cook, H. T. Shick, William H. Hendricks, J. W. H. Glass, John B. Kauffman, Charles T. Miley, Reading; A. G. Bendahl, Mt. Penn; S. C. Watterson, Spring City, and A. F. Weimer, Spring City.

\$1,400,000 FOR THE SCHUYLKILL CANAL REVIVAL

IN NEW CONGRESS BILL TO
BE PRESENTED AT
WASHINGTON

Rdg. Eagle - about 3/27/20

J. W. H. Glass, of this city, chairman of the executive committee of the Schuylkill Canal Improvement Association and also its vice president, has received the following letter from J. H. Zerbe, of Pottsville, president of the association:

"As a result of the labors of all of us and our friends, and especially of my close personal association with the Pittsburgh canal people, I take pleasure in calling your attention to the fact that a bill has been prepared to be introduced next month into Congress under the auspices of the Mississippi to Atlantic internal waterways committee, of which we are members, which is an improvement on previous bills. It provides for an appropriation of a hundred million dollars annually for the next five years. Specific mention is made in the bill of Schuylkill navigation canal of \$1,400,000, but there is one stipulation that we must guard against, which is that no improvement shall be undertaken until they are approved by the United States engineers.

"Anyhow we are on the list on the face of the earth, and now we must be prepared to fight and to show our approval by going to Washington when called upon to back our part of the measure.

"Meantime it is up to us to stir up state aid. Won't you suggest the time for a half dozen of us to get together and go to Harrisburg before the Legislature adjourns?"

A survey of the proposed improvement was made during the war by United States engineers and reported favorably by them but when the armistice was declared, the matter was dropped.

There was introduced at the last session of Congress a bill known as the Campbell bill, but Congress adjourned before action was taken. Glass appeared before a congressional committee in 1920 and the matter was favorably received by the members.

Property of HISTORICAL ASSOCIATION Port Clinton, Pa. 19549

TO PRESERVE BIG DAMS

POTTSVILLE PEOPLE WANT
CANAL FEEDERS MAINTAINED.

Rdg. Eagle 1/21/20

As the first step towards the reclamation of the Schuylkill canal, which an association of Reading, Pottsville and other Schuylkill Valley men has been formed to bring about, an effort is being made to preserve the big dams at the head of the canal when it was navigable as far as Pottsville.

J. H. Zerbe, editor and owner of the Pottsville Republican, one of the

canal restoration boomers, has been selected as the new head of the city planning commission. The new council intends to secure the Tumbling Run Park, conceded one of the finest resorts in the coal region, for the people of Pottsville, if the task is within the possibilities, and has selected Editor Zerbe to head the movement for the people.

Tumbling Run Park comprises several large lakes at the head of navigation of the Schuylkill canal, the reopening of which Zerbe has ardently advocated. The park is on the outskirts of the city, and up until recently the people were given full privileges in its use. Suddenly the coal corporations decided to use the water for mine purposes, ordering the public off. The redemption of Tumbling Run for the benefit of the people of Pottsville was one of the campaign pledges of the newly elected council. The city planning commission has power to seize the land for the benefit of the people.

FAVORS INLAND WATERWAYS

2/27 - 1920
Delaware and Raritan Canal a Necessity, Says Report to Hines

DAT: Washington, Feb. 27.—(By A. P.)—Urging a thorough-going experiment in the development of the inland waterways of the country, G. A. Tomlinson, director of the division of inland waterways of the railroad administration, in his annual report today to Director General Hines declared that "a complete economic justification for these methods of transportation" would be shown.

Mr. Tomlinson summarized the operations under the railroad administration during 1919 on the New York canal, the Delaware and Raritan canal, the lower Mississippi between St. Louis and New Orleans and the Warrior river in Alabama and the Chesapeake and Ohio canal.

Despite the limited traffic in the Delaware and Raritan canal, Mr. Tomlinson declares that operation of the waterway could not be discontinued without disregard to the interests of the users of the canal. The number of loaded boats passing through the waterway, both east bound and west bound, during 1919 was 1358, the operation resulting in a deficit of \$108,036.76 for the year.

10 MILLIONS WANTED TO IMPROVE CANAL

Rdg News Times *3/1/20*
The meeting of the executive committee connected with the association having for its purpose the opening of the Schuylkill canal for navigation purposes, at Norristown, last evening, was in charge of J. H. W. Glass, of this city.

It was decided to draw up a bill for presentation to congress, to be placed in charge of Gilbert R. Fox. Congress will be asked to make a survey of the canal and, perhaps, to authorize an appropriation of \$10,000,000 to put through the project.

Mr. Glass will see Mayor Moore, of Philadelphia, to invite him to the next meeting. He will also address the Philadelphia council. A convention will be held in Phoenixville on Saturday, March 21.

Councils of cities along the route of the canal will be asked to endorse the movement, which now seems to have taken firm root.

CHARACTER OF.

NORRISTOWN, PA., JAN. 24, 1920



"We will not choose the path of submission and suffer the most sacred rights of our nation and our people to be ignored or violated." President Wilson in speech to Congress.

Considerable progress was effected in Reading, at the late meeting of the Schuylkill Canal Association. There is no question but that the men who represented the along-river towns in that body take a deep interest in the plan to bring the old waterway again into such a condition that traffic approaching that of years ago may be equalled, if not surpassed. "Hope springs eternal in the human heart," and emphasized reference can be had to the canal would-be reclaimers, because of the state and federal phase of the move whereby it is calculated to score. By interesting themselves in the government aid way of doing things of this sort, they fully expect one day to triumph. They are all good workers, apparently, and, of a truth, ought to "get what they are after."

THE SCHUYLKILL CANAL PROJECT

The Schuylkill county men who are reviving discussion of the possible modernization of the Schuylkill Canal have an objective that is worthy their zeal and which deserves the most careful inquiry along every practical line.

In the single phase of the potential of such a waterway as a means for the transportation of the coal which is now carried by the railroad systems threading the valley, the project involves possibilities which warrant the employment of the best engineering genius available for a study of the situation and a test of its economic opportunity.

Recently the Federal Trade Commission has made public its investigation of the cost of anthracite production in the year 1918, resulting in a margin between cost and selling price so small that it seems obvious that further expense in the mining of coal, for labor or other factor, must be handed on to the consumer. At the other end, the distributor of anthracite seems to be similarly able to make out his case so conclusively that a reduction in price cannot be expected there. That leaves the cost of transportation to be considered, and if the railroads are now charging only a reasonable profit above their operating cost, the problem finally resolves itself into the question whether or not cheaper means of transportation can be found. The obvious suggestion is the waterway.

Can anthracite be floated from the mines to Philadelphia more cheaply than it can be hauled by locomotives? It may be admitted that it cannot be through a canal of the dimensions of the present waterway. But can a waterway be constructed, either by the enlargement of the present canal, or by the utilization of the river, for a part of the entire distance, after the manner in which the New York Barge Canal has taken the place of the old Erie, of sufficient capacity to provide economic transportation?

This is the real problem, and in its ultimate duplication in other directions, it may comprise what has been suggested as Pennsylvania's duty as the custodian of the anthracite supply of the country—the provision of adequate coal routes or highways by which its invaluable supply may be more reasonably available at its boundaries.

CANAL AS A BIG BUSINESS ASSET

Rdg. Eagle

"The opening of the Schuylkill canal can hardly be regarded in the light of a newcomer soliciting favor with the public, for the canal as a means of transportation is the pioneer in this section," says the Pottsville Republican.

"When the first railroad was proposed there was objection to it by certain classes on the ground that it would result in competition with the waterway and hurt its business. But the railroad came and no harm was done financially to the canal as a result of this competition, even though later the railroad did manage to get control and close up this waterway in order to obtain a monopoly of the transportation facilities, from this busy industrial center.

"When the Pennsylvania Railroad first sought to come here it was opposed on the ground that competition would be harmful to the Reading Co. We all know that there has been enough business for both companies and that the city and its business interests have been wonderfully improved as a result and that it has had the effect of doubling the number of railroad workers and the railroad business.

"Then when the opposition telephone company aspired to rights in this section it was opposed on the same grounds. The same was true of the rival telegraph company. It is but a natural condition to be expected from certain quarters.

"The reopening of the Schuylkill Canal is now opposed because it will result in competition with the railroad monopoly, particularly in the handling of coal. It is also opposed because it may result in some embarrassing disclosures and because it will result in the demand for the return to the people of some of the property rights and privileges that have been wrongfully taken from them with the abandonment of the canal.

"But as far as the public is concerned the reopening of this waterway is going to be a great boom to business in general. It is going to add to the importance and the business prosperity of the city and the region and it is going to result in more work and more workmen.

"Waterways are to be developed along the entire Atlantic coast and it will be a big thing when Pottsville is included in this great network of modern water connections. The region is awakening to the great possibilities ahead and the mass back who opposed first railroads because they would hurt the canal and now the canal because it will hurt the railroads, and who is the same who opposed the coming of the rival telephone and telegraph companies, will find himself in a hopeless and ridiculous minority."

TO CALL MEETING HERE TO BOOST CANAL PLANS

READING MAN HEADS EXECUTIVE COMMITTEE AT WORK ON SCHUYLKILL PROJECT.

Rdg. Eagle *12/21/19*

The executive committee of the Schuylkill Canal Improvement Association, formed for the purpose of boosting the reconstruction of the Schuylkill canal from the coal regions to Philadelphia, of which J. W. H. Glass, of this city, is chairman, with J. H. Zerby, of Pottsville; E. A. Markley, of Phoenixville, and W. L. Binder, of Pottstown, the other members, will shortly begin a crusade throughout the Schuylkill Valley in behalf of the canal, which is one of a half dozen specifically mentioned in the Campbell bill now before Congress, which allows \$18,000,000 annually for five years for the canalization of rivers. Mr. Glass says:

"The Schuylkill Canal Improvement Association, in order to accomplish results, must have the support and co-operation of the com-

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inities involved. It is imperative that not only the citizenry, but also civic organizations, trade bodies, welfare associations, local authorities, societies, lodges, etc., aid the association in its efforts.

"Reading is the largest community along the canal, and as chairman of the executive board I deem it proper to call the first public meeting here, with officials of the Schuylkill Canal Improvement Association attending and reporting the doings of the convention held recently at Washington. I invite suggestions, especially as to a date for public meeting, in order that as many as possible may express their views and an organization be formed in Reading or Berks county.

"The movement is not selfish in its motive, but for the realization of a worthy purpose. Those who have labored in the interest of the Schuylkill canal and those who are enthusiastic in support of the improvement of this important waterway should now come forward.

"The Campbell bill is now pending in the committee on rivers and harbors. This should be an incentive for enthusiasm, work and greater activity on our part. There is no telling at this time what the fate of that bill may be."

Phila Inquirer
May 24, 1924 THE P

WALLS TO CHECK CULM.

Schuylkill Coal Operators to Check Wash of Banks Into River
Special to The Inquirer.

POTTSVILLE, Pa., May 25.—The immense amount of culm now being washed down the Schuylkill River will show an immediate slackening up, coal operators stated today, as tomorrow culm banks will be walled up to prevent the heavy rains from washing down the culm into the river. The amount now going down is so large as to make it certain that many towns down the Schuylkill Valley will take action if the nuisance is not stopped.

Culm was noticed this morning forty miles down the river from this city, and it is said the high water in the river is now washing the culm down close to Philadelphia. By intercepting the flow of streams it is believed the operators can prevent the bed of the river in other counties from being clogged with material, as it is the case in this county.



Jacob W. H. Glass

READING MEETING DISCUSSES CANAL

Delegates Take Preparatory Step to Bring Old Water-way Again Into Use

NORRISTOWN ON THE JOB

Had Three Representatives Present; Gets Place on Executive Body

Norristown Daily Times 1/22/20

Permanent organization was effected and plans completed for pushing the Schuylkill Canal transportation project at the convention of the Schuylkill Canal Improvement Association, held yesterday, at the Hotel Berkshire, in Reading. The object of the convention was to perfect plans for the enlistment of state and federal aid to reopen the canal as an artery of navigation. There was a large attendance of delegates from the various towns along the route of the canal, and all emphasized the transportation situation as it affects their respective communities.

Norristown was represented by Norwood Matthias, Esq., President of Town Council, and Attorney Gilbert R. Fox, also a Councilman, and Harry P. Hiltner, Treasurer.

Conshohocken was represented by Richard H. Bate, Sr., Councilman and manufacturer.

Mayor Stauffer and members of the Reading City Council were among the guests. The mayor delivered the address of welcome in which he acquainted the visitors with the favorable viewpoint he and other city executives have come to regard the canal opening project.

The meeting was called to order by J. H. Zerbey, of Pottsville, president of the association. W. L. Binder, of Pottstown, served as registration secretary.

Million Tons of Freight.

Mayor Stauffer in his address said there is no reason why the canal, if restored to its proper functioning, cannot be of great public service as a carrier of heavy tonnage, thereby reducing congestion on the railroads. He stated that he knew of the plans of one concern which would be in position to start shipping at once for building purposes anywhere along its route 1,000,000 tons of slag. He pointed out also that the canal in its present state had caused a big nuisance to municipalities along its route through its accumulation of deposits of culm.

"It is a growing menace and a nuisance as it is," he said, and "I believe that the canal association could do much towards remedying the matter if taken up with the proper authorities."

J. W. H. Glass, of Reading, who is first vice president and chairman of the executive board, gave a historical sketch of the canal. He has been a leading factor in the matter of endeavoring to interest state and federal aid in putting the canal back to the original purpose it once served when it was considered as one of the leading transportation arteries in this state.

"Unfortunately, canal movements have, from time to time, been placed before Congress, but have always been pushed aside by that body," said J. H. Zerbey, of Pottsville, president of the organization. He stated that considerable work must be accomplished by the association before February 21, at which time the Rivers and Harbors Committee of Congress convenes and when it is hoped that body will consider the association's efforts in a favorable light.

Referring to control of waterways by railroads, Mr. Zerbey said: "I'm not opposed to corporations, but we must not let them scare us. The bulk of the larger corporations I have found at heart are not philanthropic, and all we must expect of the railroads in this project is that they play fair with the general public."

Luncheon was served at 12:45 p.m. and then followed the afternoon business session with several addresses, and the nomination and election of officers.

These officers were chosen: J. H. Zerbey, Sr., of Pottsville, president; J. W. H. Glass, of Reading, first vice president; E. A. Barkley, of Phoenixville, second vice president; W. L. Binder, of Pottstown, secretary; D. Elmer Dampman, of Reading, treasurer.

The following Executive Committee was named: J. H. Zerbey, Jr., Pottsville; E. J. Thomas, Schuylkill Haven; Mayor Stauffer, Reading; Fred S. Cook, Reading; C. G. Bergendall, Mt. Penn; W. L. Binder, Pottstown; H. R. Black, Royersford; A. W. Urner, Spring City; William Ellis, Phoenixville; Gilbert R. Fox, Norristown; Richard H. Bate, Conshohocken; C. J. Esterly, Wyoming; Harry Good, West Reading; Charles D. Berkey, Hamburg; Walter H. Focht, Birdsboro.

The convention was addressed by James H. Craig, Deputy Secretary of Internal Affairs, of Pennsylvania; George M. Lehman, engineer of the department of Internal Affairs of Pennsylvania, and the City Solicitor of Pottsville.

After business had been completed there was an auto tour of the city, and then dinner at the Hotel Berkshire, and an open forum on "How Improvement of Shipping Facilities for Heavy Tonnage by Canal Will Benefit All Business Interests in Cities and Towns of Schuylkill Valley, by Relieving Traffic Congestion and Helping Reduce Costs of Living."

CANAL TO SOLVE LIVING PROBLEM, DELEGATES TOLD

Rdg. News Times 1/22/20
"Can Cut Cost in Half," Declaration of Patterson; Bertolet Questions Practicability

"The cost of living can be reduced half, if proper transportation is given products," said Burd S. Patterson, of Pittsburgh, secretary to the Atlantic Board of Internal Waterways, at a meeting of the Schuylkill Canal Improvement Association held in the Berkshire Hotel Wednesday night.

"Today the railroads are beginning to realize that there is enough transportation trade in the United States for all concerned," said Mr. Patterson. "The time is here when they have learned to co-operate with all transportation lines."

At the afternoon session Wellington M. Bertolet, city solicitor of Reading, said that from his personal observation the canal project was impossible. He was followed by George H. Lehman, of the state internal department, who said he had made a personal survey and believed that the project could be carried to a successful conclusion.

Mayor Stauffer welcomed the delegates representing most of the towns in the Schuylkill valley. A resolution was introduced by President J. H. Zerbey, of Pottsville, calling upon Congress to make an official survey. A delegation was also chosen to represent the association at a convention to be held in Washington, February 21.

The delegates voted to hold the next conference in Phoenixville on March 22.

CANAL CONVENTION HERE

J. W. H. Glass, an official of the newly organized Schuylkill Canal Improvement Association, will shortly call a convention of members of the association and representatives of civic bodies in Reading, Pottsville, Pottstown, Norristown, Hamburg, Phoenixville and other points along the Schuylkill River and canal. The restoration of the canal and its operation as a government waterway from the anthracite field to tidewater is the aim of the association. The meeting will be held the second week in January, dates to be announced soon.

Reading Eagle Dec 30/19

CANAL CONVENTION JAN. 21

Wednesday, Jan. 21, has been selected as the date for the convention here of the Schuylkill Canal Improvement Association, recently organized at Washington. The civic bodies and individuals interested in the movement to restore the Schuylkill canal to usefulness are invited to meet representatives of other towns and cities. There will be afternoon and evening sessions at the Berkshire Hotel. A dinner will be served at 6 o'clock. J. W. H. Glass, an officer of the association, requests people interested in the movement to send their names to him, in case they can arrange to attend the dinner. The convention will be held here because of its central location and a plan of action is to be adopted at this meeting.

COUNCILMAN AS TREASURER

Rdg. Eagle 1/8/20
Will Receive Subscriptions for Canal Boosters' Dinner.

Councilman D. Elmer Dampman will serve as treasurer for the Schuylkill Canal Improvement Association dinner to take place here on Wednesday, Jan. 21, at the Hotel Berkshire. Tickets will be issued for the dinner to feature the canal booster convention to all who send their checks or cash to Mr. Dampman. The convention sessions will be in the afternoon and evening and businessmen who will be unable to find time for the dinner are urged to attend the business meetings. The association is trying to secure state or federal aid for the reconstruction of the canal as a freight carrier between Philadelphia, at tidewater, and Reading and Pottsville, the largest cities at this end of the waterway, which is over 80 miles long.

Burd S. Patterson, of Pittsburgh, a newspaperman, secretary of the Pittsburgh and Lake Erie Canal, will be one of the speakers at the dinner and at the business sessions as well.

WANT DAMS RESTORED

Rdg. Eagle 1/16/20
POTTSVILLE'S BIG FEEDERS TO CANAL NEEDED, COUNCIL ASKS.

On the eve of the waterways convention in this city next week, to boost the restoration of the Schuylkill Canal, Pottsville city council has taken steps to aid the movement. The officials there demand that coal companies which have seized the Tumbling Run dams, above Pottsville, the headwaters of the canal, restore them to the purpose for which they were built.

A resolution was passed declaring that this canal was a public waterway on which all the people of the anthracite region had the privilege of placing boats and engaging in transportation of coal and other articles of commerce with Philadelphia and that the people were never consulted in the practical abandonment of the canal and the diversion of the dams to use by coal companies.

Councilmen John B. Dengler and Dr. J. Oren Bearstler introduced the resolutions, which passed unanimously. At the same time a demand was made that the Tumbling Run Park, also seized by coal and water corporations, be returned to the people and preparations were made for legal proceedings if the demands are not complied with. City Solicitor Morris Spicker was elected a delegate to the inland waterways convention at Reading next week, to be held to boom the rejuvenation of the canal.

HILADELPHIA, SUNDAY MORNING, SEPTEMBER 14, 192

LAW SAVES RIVERS FROM OIL MENACE

Federal Edict Protecting Delaware and Schuylkill From Pollution Now Active

CARRIES LARGE PENALTIES

At last a law has gone into effect which may help to protect the Delaware and Schuylkill Rivers from pollution with oil—a nuisance which local authorities say has grown into a menace to property and life.

A year ago a passerby lit a cigarette on the Passyunk avenue bridge, tossed the lighted match into the water—and the river burst into flames. The new law furnished a way

to try to prevent such happenings hereafter and to try to rescue the banks of the Schuylkill from their past condition of being slimy with oil.

This new law, passed by Congress and signed by the President June 7, became enforceable last week. Three months had to elapse after its passage before its penalties could be levied.

Large Fines Provided

The new law forbids discharge of oil into coastal navigable waters from vessels using oil for fuel or carrying more oil than is required for lubricating purposes. Federal officials in charge of river and harbor improvements and the officers of the customs and coast guard service have authority to arrest violators. The penalty for violation is a fine of \$500 to \$2500 or imprisonment for thirty days to one year, or both. The discharge of oil from the shore, however, is not covered by the new act. But \$50,000 has been appropriated for an investigation by the War Department concerning what polluting substances are being deposited from shore in navigable waters or in streams flowing into such waters. The Secretary of War has been directed to report recommendations to Congress for remedial legislation.

Among the chief offenders in the past, in discharge of oil into navigable waters, have been oil tankers. After discharging a cargo of oil in some foreign port, the vessel fills its tanks with water, then crosses the ocean homeward bound. On reaching the Capes, the tanker has been likely to begin at once pumping out the water from its tanks, spreading a film of oil over the Delaware River all the way up from the ocean. The object has been to save time by having the tanks empty and ready to receive new cargo the minute the tanker docks.

New Separator May Be Used

Use of a new device which is similar in principle to a cream separator makes it possible for the oil to be recovered when a water-ballasted tanker is pumped out. Thus there is hope the tankers may be encouraged to obey the law by the fact that compliance with it would save money.

"Harbors can be kept clean from oil by proper supervision," declared Colonel F. C. Boggs, of the Corps of Engineers, United States Army, district engineer in charge of river and harbor improvements in this district, which includes the Delaware and Schuylkill Rivers and their tributaries. "Los Angeles Harbor, which has a great traffic in oil, is a notable case in point. But enforcement is no easy task."

DATE.

FIRST CANAL CONVENTION*Hamburg Item 1/16/20***IMPROVEMENT ASSOCIATION TO MEET AT READING**

The first annual convention of the Schuylkill Canal Improvement Association, which was formed for the purpose of canalizing the Schuylkill canal from the coal regions to tidewater, will be held next Wednesday, January 21, at the Hotel Berkshire, Reading.

The interest which has already been manifested in this movement by the communities affected by this project, and numerous organizations, augurs well for an early accomplishment at the object in making the Schuylkill canal a medium of transportation. Since there is now pending in the House rivers and harbors committee at Washington a bill known as the Campbell bill, which affects the Schuylkill canal, this is the opportune time to show interest and activity in this movement. The convention promises to be important and interesting from every point of view.

The opening session will take place at 10 a. m., the business session at 3 p. m., and a special dinner will be served at 6 p. m.

Hamburg and the local Board of Trade will be officially represented by Charles D. Burkey and H. Raymond Shollenberger, heads of the local banks, who will very likely be accompanied by Burgess Sousey and A. J. Raubehold, president of the trade board, and probably representatives of Stroh & Seaman and I. S. Lenhart & Son, coal dealers, who are primarily interested in the successful operation of the canal.

CANAL MEETING*Rdg. Eagle 1/17/20*
TO BE HELD IN THIS CITY NEXT WEEK.

First definite steps toward the realization of a project which has as its aim the establishment of the Schuylkill canal in its former sphere of usefulness as an inland waterway from the coal regions in the eastern part of the state to tidewater will be taken at a one-day convention to be held by the Schuylkill Canal Improvement Association to be held in Reading Wednesday, Jan. 21, at the Hotel Berkshire.

Invitations to state and national officials and also to all boroughs and cities along the waterway have been mailed and replies received. There will be representatives from all of the towns along the route. Speakers have not yet been selected, but one of the most prominent will be Burd S. Patterson, of Pittsburgh, secretary of the Lake Erie and Ohio River canal board of the commonwealth of Pennsylvania.

James H. Craig, deputy secretary of the Department of Internal Affairs, and George M. Lehman, an engineer of the department, plan to attend. Secretary James F. Woodward will be unable to be present.

Regrets have been received from Gov. Sproul, Congressman Arthur G. Dewalt and other prominent officials. All of them have declared that they are heartily in sympathy with the movement and offer their services at any time they may be needed.

J. W. H. Glass, chairman of the executive board and vice president of the association, has been very active in the work and declares that he feels much encouraged by the assurance of the secretary of internal affairs that he is interested in the move to canalize the canal and make it once more an efficient inland waterway. "Since 1874," Mr. Glass declared, "the inland waterways have been under the control of this department and if they take an interest in this work we are likely to realize our aims."

D. Elmer Dampman, city councilman, of Reading, is treasurer of the organization. J. H. Zerbey, of Pottsville, is president, and W. L. Binder, Pottstown, secretary.

The program for next Wednesday calls for an opening session at 10 o'clock, a business meeting in the afternoon at 3 o'clock and dinner at 6 p. m. The public is invited to attend the affair, including the banquet at 6 o'clock for which there is a charge of \$2.

CANAL LINKED IN BIG PROJECT**CAMPBELL BILL WOULD IMPROVE SCHUYLKILL****AMBITION SCHEME TO RE-OPEN, ENLARGE AND EXTEND INLAND WATERWAY THROUGH READING.***Rdg. Eagle 12/12/19*

Washington, Dec. 12 (Special).—The Schuylkill canal probably received more prominence in the past few days than was ever accorded it during its full 100 years of existence, and plans for its improvement are included with those for the much larger avenues of water commerce. While the changes of final accomplishment of improvement are not overwhelming, yet the prospect for government control and financing of the Schuylkill canal is not the least of the possibilities for the betterment of the other inland waterways of the nation.

As the result of the Washington meetings of Monday and Tuesday, the Schuylkill canal improvement plans are now incorporated in the general list of the main bill which is to go before Congress after the first of the year calling for national consideration of the advantages of improved water transportation incorporated under the following projects:

The Pittsburgh and Lake Erie canal.

The Atlantic coastways system. The Mississippi Valley waterways. The gulf plains of inland waterways.

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STATE OFFERS THREE METHODS FOR FLOOD CONTROL IN READING

Rdg. Eagle — Aug. 1922.
SUGGESTS ENLARGEMENT OF RIVER CHANNEL OR BUILDING OF CONCRETE WALL OR LEVEE ALONG EAST BANK

In 1919 the Pennsylvania water supply commission sent to Mayor Filbert a report of a river and culm survey of the Schuylkill that had been made by state engineers, the contents of which are of particular interest at this time because of the revival of the subject due to the huge deposits of detritus that clog the channel of the river in and near Reading.

At that time Mayor Filbert acknowledged receipt of the report and later, on request of the city, the state made a topographic survey of the Schuylkill channel at a cost of more than \$3,000, and loaned it to the city.

The state has no appropriation for the work of deepening the channel. Such appropriations could be made only by special acts. If the Berks legislators had gotten busy at the time the report was first sent to Reading, four years ago, it is possible they might have procured appropriations from the state to carry on this work.

Thomas J. Lynch, secretary of the state water supply commission, when seen by the Eagle's Harrisburg correspondent, declared that this survey is still available.

Under the caption, "Suggestions for flood control plans for the Schuylkill River at Reading," the river and culm survey that was sent to Mayor Filbert Aug. 26, 1919, covered the subject constructively and exhaustively. Mr. Filbert replied on Sept. 2, 1919. The complete text of that report follows:

DRAINS 900 SQUARE MILES.

"The Schuylkill River, at Reading, has a drainage area of about 900 square miles, consisting largely of mountainous country. The mean annual rainfall is about 45 inches. More or less dependable high water marks have been preserved of the more important floods for more than 100 years.

"During recent years accurate records of flow have been kept, and from a knowledge of the characteristics of the river, estimates have been made of the discharges of the most important floods. The highest on record was that of September, 1850, the discharge of which is estimated to have been 80,000 cubic feet per second. In October, 1869, and on the last of February, 1902, floods occurred which reached within two feet of this extreme stage. The discharge on these occasions is estimated to have been about 70,000 cubic feet per second. The estimates of these early floods are probably much in error, but an examination of the topography of the watershed, and of the storm rainfall character-

istics of the region, lead us to believe that a flood might occur at Reading of 90,000 to 100,000 cubic feet per second, but that such floods would be very rare."

ORDER SCHUYLKILL DREDGED

Bulletin 8/27/19 Contracts Calling for \$1,000,000

Work Awarded by U. S. Engineer

Contracts totalling \$1,000,000 have been awarded by Colonel W. B. Ladue, U. S. engineer for this district, calling for the dredging of the Schuylkill river.

Completion of the work will allow of ocean-going steamers navigating the Schuylkill with 20,000 ton cargoes as far upstream as Passyunk av.

The contract calls for the removal of 2,500,000 cubic yards of mud from the river bottom from the back channel at the Navy yard to a point 800 feet above the Harrison Paint Works, a total distance of five and one-half miles. The award was made to the American Dredging Company, of this city, and the Maryland Dredging and Contracting Company, of Baltimore.

Hitherto steamships of heavy tonnage have been able to load only a portion of their cargo at Schuylkill river wharves before proceeding to deep water, where the remainder of the cargo would be taken on from lighters.

In addition to being deepened, the channel will be widened, and at flood tide will have a depth of 36 feet.

Above Passyunk av. it will have a depth of 26 feet as far as Bartram's Gardens, and above that the controlling depth will be 22 feet. The deeper section of the channel will be 300 feet wide. The 26 and 22 foot sections will be 200 feet wide.

EXPERIENCE MIGHT PROVE COSTLY:

A flood like that of 1902 inundates all or parts of more than 30 city blocks, most of which are closely built up, and also covers many miles of main and side tracks of railroads within the city. A flood two or three feet higher than this, which may occur, would cause a great deal more damage. Quite generally a city in such a situation must actually go through the experience of a great flood before it will take account of its interest and be willing to pay for the necessary protection.

In working out plans for flood prevention sometimes the problem is very much simplified by the fact that only one method of improvement is possible. In other cases several entirely feasible methods present themselves, any one of which can be followed at an expense that is fully justified.

Floods on the Schuylkill River at Reading can be controlled by either of two or three methods, and careful and detailed surveys and studies will be required to determine finally which is best and least costly. Any method of flood control will be expensive, and may cost more than would seem at present to be justified by the interests involved.

THE TULPEHOCKEN CASE.

Control by dams and retarding basins may be dismissed at once as impracticable in this case. Most

of the best sites for dams and for storage areas are occupied by railroads.

The Tulpehocken Creek, entering the Schuylkill from the west at Reading, has apparently excellent dam sites and storage areas that are not occupied by expensive improvements.

This stream, doubtless, can be completely controlled by dams, but its drainage area is only 200

square miles, as compared with 900

square miles for the Schuylkill at

Reading, so its control would only

partially solve the problem. The

control of this one stream by a dam

and retarding basin probably would

cost more than complete flood con-

trol for the city by other methods.

Tulpehocken Creek would, however,

furnish valuable water supply stor-

age, if it should be needed, for in-

dustry in or below Reading. An

examination of the map suggests a

straightening of the river by cutting

off two bends just below Reading.

Such a straightening would elimi-

nate the need for four large railroad

bridges, but would require two very

deep cuts, one of more than 100

feet. They would cost more than

protection by other means, and

would only partially solve the prob-

lem.

FEASIBLE METHODS.

"Methods of flood control which

appear to be feasible from an en-

gineering viewpoint are:

"The enlargement of the river channel by excavation.

"The construction of a concrete wall along the east bank of the river.

"The construction of a levee along the east bank.

"A combination of the three methods mentioned above.

"The enlargement of the river by excavating the channel would require the removal of perhaps 1,000,000 cubic yards of material in order to secure full protection. The most feasible method for doing this work probably would be excavation by means of dragline machines of the revolving type, loading the material on cars and transporting it to some place where it could be dumped. The cost would depend largely upon the difficulty of finding suitable places for wasting the excavated material, upon the character of the soil or rock excavated, and upon interference with existing improvements. These and general construction costs are so difficult to determine in this case that the cost per yard cannot be estimated without careful investigation. It probably would be between 60 cents and a dollar per cubic yard. Among objections to this plan would be the possible high cost of maintaining the excavated channel due to silting or caving of banks, the possibility of undermining bridge foundations and possible interference with existing dams.

One important advantage of protection by channel excavation is the fact that local drainage would not be interrupted, and that a partial improvement might be carried out without danger of failure such as would follow the overtopping of levees.

LEVEE HARDLY FEASIBLE.

"A levee along the east bank of the river is not feasible unless the bed of the Schuylkill canal can be occupied because the canal and railroad tracks are too close to the river to allow levee construction between them. If the canal can be entirely abandoned, complete protection could be afforded the city by this means at a cost of perhaps half a million dollars, except that back water at the lower end might not be entirely prevented. If the canal cannot be entirely abandoned, it might be carried through the city in the bed of the river by the construction of two low dams fitted with locks, thus releasing the present canal for a levee location.

"The narrow strip of land between the canal and the river, while not wide enough for a levee, probably would be a suitable location for a concrete wall. The uncertainty in the cost of such a wall, aside from present fluctuations of construction costs in general, is because the character of the foundation is unknown, as are also the complications which would be encountered in occupying part of the canal right of way. Such a concrete wall would require a flood gate where the canal leaves the river in the upper part of the city, and probably another at the lower end of the city where the canal enters the river.

"Methods of flood control which

ENTMENT.

PORT OF

INSTRUCTIONS AT

means of such a wall might be three-quarters of a million dollars, but dependable estimates would require very careful investigation.

MAY COST A MILLION.

"Along part of the east bank of the river through the city there is room to construct a levee without interfering with canal or railroads. The improvement might consist of an earth levee where there is room and of a concrete wall where the canal is very close to the river bank. Probably a limited amount of channel improvement would enable such a combined improvement to be carried out with further economies.

"The comparative economy of these different methods can be determined only by comparisons following careful examinations of foundation material for concrete walls, of the possibility of disposing of excavated earth, of the possibility of displacing or moving the canal, of the cost of right of way, and of other items. It is probable that complete protection by any method will cost not less than a half million dollars, and it is quite probable, judging from a preliminary examination, that complete protection can be secured for not to exceed a million dollars."

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CANAL IMPROVEMENT

PROPOSAL IS BOOSTED

Norristown Times 3/22/20

Congressman Watson Submits Bill for Possible Action by National Legislators.

The proposal for the improvement of the Schuylkill Canal received a tremendous boost on Saturday afternoon, at a convention of the Schuylkill Canal Improvement Association in the City Hall in Phoenixville. There was a large and deeply interested audience present, and from the opening of the meeting at 2:30 until the close about 6 o'clock, many strong arguments were made, showing the seriousness of permitting the canal to be abandoned and also the wonderful advantage it would be to the communities if the canal were enlarged and improved, so as to make it a modern waterway.

Congressman Watson, delivered one of his convincing and forceful speeches, urging upon the people the importance of these inland waterways and the great advantage that they are to the shipper throughout the country. Transportation is the great need of the present time, and the railroads have now more than they can handle or will be able to handle for many years to come. Mr. Watson submitted to the meeting a proposed bill for action by Congress authorizing a survey of the Schuylkill Canal and making an appropriation for that purpose. This bill was referred to the Legislative Committee of the Association, of which Gilbert R. Fox, Esq., of Norristown, is chairman. The committee approved the bill, and it will be presented to Congress at an early date.

The convention desires to impress upon all who are interested in the preservation of the canal the importance of writing to their representatives in Washington and securing support for this bill.

Addresses were also made by Senator Eyre, James H. Craig, Deputy Secretary of Internal Affairs and George M. Lehman, Engineer of the department and others.

The convention by resolution decided to request the various municipalities through which the canal passes to refer the question of compelling the owners or lessees of the canal to keep it in proper condition for transportation to the solicitors of the respective municipalities. These solicitors would then meet and determine just what action should be taken to protect the rights of the people in the canal. The resolution was referred to the chairman of the Legislative Committee to arrange with the various municipalities.

FLOOD PREVENTION COSTLY

Record 8/28/19

Methods Suggested for Reading May

Entail Expense of Million.

Harrisburg, Aug. 27.—A series of suggestions for prevention of floods at Reading, prepared at the request of the Mayor, was made public today by the State Water Supply Commission, including changes in the Schuylkill River and other streams and along banks which would cost from \$500,000 to \$1,000,000.

Control by dams and retarding basins is dismissed as impracticable by the commission, which states that some of the best sites are occupied by railroads. The Tulpehocken, which enters the Schuylkill at Reading, is well adapted for dams, but its drainage area is not extensive and it would be more valuable for water storage for industrial purposes. Straightening of the river below Reading also would be expensive.

The methods of flood control which appear feasible are given in the report as enlargement of the river channel by excavation, construction of a concrete wall and a levee along the east bank and a combination of the three methods.

HAVE NO DELEGATES RELATIVE TO CANAL Norristown, Pa., 12/10/19

Towns, and Manufacturing Concerns

Not Manifesting Deep Interest.

While Phoenixville and other municipalities and business interests up the Schuylkill Valley have named one or more representatives to accompany the special delegation bound for Washington on Sunday to present the condition of the Schuylkill Canal as a means of transportation of supplies to the Waterways Commission, interest in the matter has not been manifest by any of the municipalities in the immediate vicinity or by the manufacturing interests of the lower valley.

As a matter of fact nothing bearing on the advocating of the use of the canal in the present industrial and commercial crisis has been formally given consideration by the Town Councils of Norristown, Bridgeport or Conshohocken. The relative importance of the canal as a source of supply to the boroughs has been at such a low ebb for some years as to be removed as a factor.

Inquiry this morning developed the fact that the matter had not been brought to the attention of the manufacturing interests of this community and that therefore, either individually or concerted, no action had been taken in the premises. The re-establishment of the canal to the base of the coal supply had passed hope, so far as local industrial establishments were concerned, though such manner of supply would be a matter of decided advantage in many respects. Just what will be done at this late hour is not clear, but in all probability a step will be taken that will serve to give voice to the interests of the communities hereabout in the early re-establishment of the canal.

CANAL BOOMERS BACK

WILL START CRUSADE SOON IN
BEHALF OF SCHUYLKILL
WATERWAY.

Rdg Eagle 12/10/19

The Reading and Schuylkill delegation to the inland waterways convention in Washington has returned after completing an organization to boost the reconstruction of the Schuylkill canal all the way from the coal regions to Philadelphia. The executive committee of the new organization, of which J. W. H. Glass, this city, is chairman, will meet shortly to begin a crusade all through the Schuylkill Valley in behalf of the canal.

The other members of the committee are J. H. Zerbey, Pottsville; E. A. Markley, Phoenixville, and W. L. Binder, Pottstown. The Campbell bill now before Congress, which allows \$100,000,000 annually for five years for rivers and harbors, includes \$18,000,000 for the canalization of rivers. The canals specifically named are the Schuylkill, Cape Cod, Delaware and Raritan, Chesapeake and Delaware and the Lehigh canal and a proposed waterway from Norfolk, Va., to Fer-

MANY COMPLAINTS.

A survey had been prepared by Arthur Morgan, flood control engineer, of Dayton, O., which contained the recommendations.

When the commission made certain alterations in the pier and abutment plans of the bridge erected by the Carpenter Steel Co. over the river at Reading, it acted under the authority of the act of 1913. This act simply provides that no changes or alterations can be made in a river channel without the approval of the commission.

The commission's action in the culm matter would be the same as that taken in the case of the Carpenter Steel Co. bridge. It would send an engineer to investigate whether the channel was sufficient to carry off the water at flood level without menace to property along the channel and would approve or reject on that basis.

At the present time there are complaints made by a number of cities along different streams concerning blocking of the channel. Bethlehem, the home city of Commissioner Lynch, has a river problem on its hands.

On the culm question no branch of the state government appears to be clothed with authority to do anything. Attempts to stop pollution of streams by culm deposits have failed to get anywhere in the courts.

CAVEN-HALL WATER PLANS COMPARED

Chamber of Commerce Shows
Favorable and Unfavorable Fac-
tors in Proposals of Each

Public Letter 10/30/20

COUNCIL CONSIDERS THEM

A comparison of the plans for water supplies as offered to Council by Councilman Charles B. Hall and Frank H. Caven, Director of Public Works, was made public today by the Chamber of Commerce.

It was prepared by Joseph F. Hasskarl, former Director of Wharves, Docks and Ferries, consulting engineer and chairman of the Harbor and Navigation Committee of the chamber.

The Hall "three-step plan" requires eight years and costs \$135,000,000 and is based on the findings of four engineers appointed by Mayor Moore to investigate water supplies.

It proposes to establish reservoirs on the Perkiomen, Tohickon and Neshaminy watersheds, having a total capacity of 120,000,000,000 gallons, with pumping stations on the Delaware river near Yardley and other points of vantage.

The Caven plan embodies a suggestion drawn by Fred C. Dunlap chief of the Bureau of Water, and proposes the construction of a single, 600,000,000,000-gallon reservoir on the Neshaminy and a pumping station at Yardley, at a cost of \$60,000,000, plus \$28,000,000 in improvements to filters and other work which will be necessary regardless of the plan selected. Mr. Hasskarl's summary follows:

"Favorable factors in the Hall plan:

1. For more than fifty years the Perkiomen, Tohickon and Neshaminy water sheds have been pointed out as external sources of water supply by the different boards of engineers and commissions appointed to investigate this subject.

2. This project is susceptible of progressive, or gradual development as conditions require or means permit.

3. Each unit, or part could be put to full use as soon as it was completed, and operated independently as long as desired and eventually it would become an integral part of the whole project.

4. It permits the continued use of millions of dollars' worth of filter beds, pumping stations and other necessary plants now in use and in good condition.

5. It would give much needed relief to that section of the city supplied by water from the Schuylkill river, as soon as the first unit (Green Lane Reservoir) was completed, by stabilizing, and greatly increasing the dry weather flow of that stream, thereby, diluting the trade wastes which make this water so objectionable at times; thus minimizing that danger and objection, all of which would tend to greatly improve the quality of the water.

6. It would give the city practical control and State protection over sparsely settled water sheds yielding about 400,000,000 gallons daily; thus leaving only a small portion of the city's water supply to be taken from the Delaware river, and which could be greatly increased in later years as found necessary.

7. It would bring water to the city from several different sources via separate aqueducts, far removed from one another, each operated as an independent unit, or plant.

The six reservoirs would have storage capacity of 120,000,000,000 gallons, which is enough to supply the city for many months, and give ample time for sedimentation, thus greatly improving the quality of the water, and materially lessening the work done by the filters.

All the water drawn from the reservoirs would come to the pumping stations in Philadelphia by gravity. Their great size would insure an abundant supply at all times and would make it unnecessary to pump or draw from the Delaware river near Yardley during the rainy seasons and early spring when the snow melts.

Unfavorable Factors in the Hall Plan:

1. The Schuylkill would continue to be used for part of the city's water supply until the second part of the project has been completed.

2. The Delaware river would continue to be used for part of the city's water supply until the third part of the project has been completed.

3. This project would, perhaps, cost \$30,000,000 more than the other, or second project, if that one should prove feasible.

Favorable factors in the Caven plan:

1. This project would cost perhaps \$30,000,000 less than the Perkiomen, Tohickon, Neshaminy and Delaware project.

2. It would furnish water of good quality.

3. Few engineering difficulties would be encountered in its execution.

4. The complete abandonment of the Schuylkill river as a course of water supply when this project has been completed.

5. No purchase, or settlement, necessary with the Schuylkill Navigation Company for property acquired, rights or privileges, as none would be required.

6. Five less reservoirs and dams to be cared for.

7. The aqueducts from the Neshaminy would be shorter than those from the Perkiomen.

Unfavorable factors in the Caven plan:

1. The project calls for the erection of a 600,000,000 gallon daily pumping station on the Delaware river, near Yardley.

Carefully kept records show that during severe droughts there were times when the entire flow of the Delaware river was considerably less than 600,000,000 gallons per day at that point.

2. According to a legal opinion rendered by City Solicitor Kinsley in 1898, Philadelphia could take from the Delaware river, above Trenton, "only half of the flow of the stream, provided it would not thereby interfere with the use of the stream for navigation and other purposes."

3. At present some of the water from the Delaware river above Trenton is diverted into the Delaware-Raritan Canal.

If the larger, or ship canal, connecting the Delaware with the Raritan is ever constructed according to present plans, and all shipping interests hope this will be done soon, a much greater volume of water, estimated by some engineers as from 100,000,000 to 200,000,000 gallons daily, will be drawn from the Delaware river above Trenton, for that purpose; thus materially reducing the quantity available for Philadelphia, especially at times of low stream flow.

4. New York city has been making surveys and borings for a reservoir on the Neversink river, a branch of the Delaware river near Port Jervis. If this is even constructed it will further diminish the stream flow of the Delaware river at time of low water.

5. The Metropolitan Water District of New Jersey has, for some time, been considering taking water from the Delaware river at Belvidere. If this project should ever be executed it would materially reduce the supply available for Philadelphia.

6. The Delaware River is an interstate stream and therefore it is doubtful if any large quantity of water could be drawn from it without the consent of the State of New Jersey. Past experience shows that it usually requires many years to obtain the

necessary concurrent legislation for such a project; as an illustration, New York City abandoned the Housatonic as a source of water supply, owing to the inter-State difficulties and instead took water from the Catskill Mountains, a much more expensive project.

7. This project proposes concentrating upon the Queen Lane pumping station by enlarging the same to capacity of 350,000,000 gallons per day, and then abandon the Belmont and Shawmont stations, which, for many years, have supplied large sections of the city. Such procedure would expose a large part of the city to an unnecessary hazard as it is not so very unusual for pumping stations to be damaged or wrecked, or put out of commission from one cause or another.

8. There is no assurance that in years to come the Delaware river above Trenton may not also be seriously polluted by trade wastes from the rapidly growing cities, towns and industrial plants along the shores and on its tributaries.

9. This entire project will, in all probability, cost much more than the \$60,000,000 estimated, especially if the cost of all enlargements and improvements necessary to complete the same are added to the above figure, and it will not give relief, or better quality of water until all the work has been practically completed.

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NO BOATING THIS SUMMER

9/21/20

THAT IS THE CANAL OUT-LOOK AT PRESENT TIME

The flood in the Schuylkill north of Reading has put a damper on boating. The dams are full of mud and culm and the channels effectively closed and some locks damaged. Some of the people living along the river say that it will be impossible to clear them and get them in shape for navigation for at least three months. Thousands of tons of culm were washed down the stream from the deposits north of Port Clinton, and the black substance can be seen all along the stream, especially where the water overflowed its banks. It is said that considerable damage was sustained by property owners.

It is more than likely it not a

boat from the coal regions will pass down the canal during the coming summer. Those who have been watching events for years are of the opinion that the days of the canal, between the coal regions and this city, are over forever as far as boating is concerned.

The business has been growing less and less each year and last week's freshet may be the final act in the business tragedy of this great waterway.

The agitation now on to have Congress take hold of the canal appears to be about the only thing that will save it.

Income from Water Power.

The Schuylkill Navigation Co. does not appear to be much concerned about the matter. Even if boating is abandoned, the corporation will still have an excellent income from the water power which it sells between the big dam below this city and Philadelphia. There are now a number of electric power plants using the river and canal and more will follow year by year. All must get permission from and pay rental to the navigation company.

Trees Are Barked.

The huge chunks of ice striking the trees along the banks during the recent freshet ground the bark from nearly all of them. The trees present an odd sight. People going over the Penn street bridge are attracted by the unusual appearance of the trees.

CANAL MEETING WAS A FINE ONE

Congressman Watson In His Address Promised His Support To The Movement

Daily Republican
Phoenixville

BOROUGH WILL BE

ASKED TO CO-OPERATE

3/22/20

A convention of the Schuylkill Canal Improvement Association was held at the Borough Hall on Saturday afternoon with a good attendance of representative business and professional men of the different towns in the Schuylkill Valley, and the generally expressed opinion was that the meeting was a very successful one and was sure to result in good for the community.

The meeting was called to order by E. A. Barkley, second vice-president and the invocation was given by the Rev. George N. Herzog, of the First Presbyterian Church, who prayed for divine blessing on the meeting and the work being done of the community as a whole.

Burgess Thomas J. O'Brien followed in a short welcoming address and John Haviland, Esq., was introduced to speak on the subject, "Relation of the Canal to Phoenixville". The speaker told of the benefit which would result to this town in the re-opening of the Canal to traffic, and of the handicap under which the Borough now labored in being obliged to haul supplies of coal and coke for the pumping station at Cromby, at a considerable added expense to the taxpayers. The Schuylkill Navigation Company was chartered in 1815, and the Co. was virtually made master of the waters. If it fails to use its power, or should make an abuse of the same, the charter can be revoked, and abandonment causes the corporate right to revert to the grantors in this case, the State Legislature. The interests of the people must be safeguarded and the speaker felt that a bill should be introduced at Harrisburg, asking the State to take over the Canal, as the interests of the people at large are of more importance than those of a few.

Mr. Barkley spoke briefly from the point of both the financial and sentimental sides of the question, and asked if the Canal had a commercial value, and answered this by saying that if not valuable in that way, the Reading Co. would not have taken it over.

"But must we only look at the dollar side; have the people no rights, in a sentimental way? They did not stop to think of that when a beautiful lake at Valley Forge was destroyed. Let us introduce some sentiment into the question, and look at the interests of the people instead of thinking only of the dollar, and forget the old fox-trot, the public be d—n."

J. H. Zerby, President of the Association, was introduced, and took charge of the meeting, M. J. G. Smoyer being asked to act as secretary in place of Mr. Binder, who was ill and unable to attend the meeting.

J. W. H. Glass was called on for the report of the Executive Committee, and gave a verbal resume of work done.

Gilbert R. Fox, Esq., of the Resolution Committee, had no report.

The president's address covered the forming of the Canal Improvement Association, in Washington, D. C., in December, 1915, and Mr. Glass followed this up by giving a history of the Canal, chartered in 1815, when such matters were not as well regulated as now. Stock sold at a par value of \$50 per share, but afterward sold at times as high as \$180. He then went on to advise that the legal aspect of the question be looked into and suggested that the matter be laid before the Public Service Commission. Have the farmer take the matter up, as many acres of fertile land are annually destroyed by culm from the mines.

Burd S. Patterson, Secretary of the Pittsburgh and Lake Erie Canal Co., gave an interesting talk on the forming of the different Associations for the improvement of the great waterways of the State and Nation. He spoke of the coal shortage and urged the use of water routes, not only as a cheaper means of transportation, but also for the purpose of hastening the moving of freight, as the railroads are congested and have about reached the limit of their facilities for expansion.

"Fourteen million tons of coal were taken down the Monongahela River, at a cost to the shippers of thirteen cents per ton, while the railroads charged eighty cents. Railroads would not be harmed by the use of the waterways, but helped."

Mr. Patterson also advocated an appeal to the Public Service Commission of the State, and also to the National Government, if necessary.

Hon. W. H. Watson, a representative in Congress from Montgomery County, who had prepared a bill for submission to Congress, appropriating \$5,000 for a survey of the canal, was the next speaker. He had a copy of the proposed bill with him and this was referred to Mr. Fox, of the Resolutions Committee for approval or change as might be thought desirable, but the only suggestion made was that the amount asked for be increased to \$10,000 and with this change, Congressman Watson promised to introduce the bill to-day. He spoke of the need of water ways to supplement the railroads of the country as a means of transportation and also spoke on the subject of the improved roads as a means toward this end, but these are often in bad condition and we must look to the airplanes and the waterways to help out.

CULM REMOVAL UP TO THE CITY COMPLAINT FROM READING NOT YET RECEIVED BY STATE AUTHORITIES

Harrisburg, July 20 (Special).—The state water supply commission has no authority to remove culm deposits which are blocking the Schuylkill River near Reading, according to Thomas J. Lynch, secretary of the commission.

No official complaint has been filed yet with the commission by Reading city officials, but members of the commission have been keeping themselves informed on the situation by Reading newspaper accounts of the affair.

"It is a matter solely for the city," said Secretary Lynch today, "and it is a big problem, which probably will mean excavation of the channel and construction of dikes. The only function which the commission can exercise is to examine any plans which may be prepared by the city and approve or reject them."

Commissioner Lynch says that some time ago the commission sent a report to the city of Reading, informing Council what would have to be done for the protection of the river channel.

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DETERMINED TO OPEN THE CANAL Bill Provides \$10,000 FOR STATE SURVEY

Addresses by state and national officials, in which they promised to support the project, were heard at a conference of the members of the Schuylkill Canal Improvement Association, held at Phoenixville Saturday afternoon. The association hopes to have the Schuylkill canal restored to its former state of usefulness as an inland waterway, direct from the anthracite coal fields to Philadelphia.

Cities and boroughs along the entire length of the canal have been interested in the plan, and at the Saturday meeting a resolution was passed, calling upon all cities and towns to appoint their solicitors members of the executive committee to work with Attorney Gilbert R. Fox, of Norristown, and prepare legislation to be presented at the next session of the state Legislature.

TO FIGHT TO A FINISH.

Congressman Henry G. Watson, of the Bucks-Montgomery district, was present at the hearing. He has prepared a bill calling for a survey of the canal by the state and providing \$10,000 for the work. His bill includes a request to the government to furnish funds for the rebuilding of the canal. Mr. Watson declared he is going to fight to the finish in an effort to have the canal again put in operation.

George M. Lehman, engineer, of the Department of Internal Affairs,

Harrisburg, declared that in 1916 he made a survey of the canal for the government. "If the war had not closed," he said, "the government would have at once taken over the canal and opened it for traffic, for the officials were after some sure method of bringing coal to a port."

State Senator T. Larry Eyre, of Chester county, expressed the thought that there was no doubt but that the Schuylkill Navigation Co. charter had been violated. "I am ready to help you put this through," he said.

James H. Craig, deputy secretary, Department of Internal Affairs, spoke briefly, endorsing the work.

In the near future, it was announced, the matter will be taken before the state public service commission.

COUNCILMANIC ENDORSEMENT DESIRED.

In the meantime, however, the most important work is that of having council members in towns along the canal endorse the plan of having it put in service and have their solicitors consult with Mr. Fox, at Norristown.

The next meeting will be called by J. W. H. Glass, vice-president and chairman of the executive committee. It will likely be held at Norristown.

Members of the Phoenixville council were hosts on Saturday and entertained the visitors who attended the conference. None of the city officials of Reading were present. E. A. Barkley, second vice-president, presided.

Mr. Glass expects to have a lecture delivered in Reading in the near future on the subject of the canal and the speaker will illustrate his address with lantern slides.

CANAL EXPERT TO SPEAK

Wilfred H. Schoff, of Philadelphia, secretary and treasurer of the Atlantic Deep Waterways Association, will be the principal speaker at the Schuylkill Canal convention, to be held at Phoenixville on Saturday, March 20. Mayor Moore, of Philadelphia, is president of that organization. The two had a conference in regard to the matter. Both are in favor of the movement to have the government improve the Schuylkill waterway. Mr. Schoff's address will be illustrated, showing the importance of the canal as a link in the deeper waterway idea. Two years ago the government asked him to make a thorough examination of the Schuylkill. He did so in connection with an engineer. They gave a favorable recommendation. At that time the government had control of the railroads and it would have been a simple matter to have taken over the canal. It will be more difficult now.

E. P. Albrecht, president of the Philadelphia Bourse, an official of the National Rivers and Harbors Congress, may attend the canal conference. He is in favor of the movement. J. W. H. Glass, first vice-president and chairman of the executive committee of the Schuylkill Canal Improvement Association, is trying to have Mr. Schoff deliver his illustrated address in this city.

CANAL RE-OPENING PLAN

3/18/20
Congressman Watson Will Address

Meeting in Phoenixville

Active preparations are being made for the meeting in the interests of the re-opening of the Schuylkill Canal which will be held in Phoenixville next Saturday and a good program of speaking has been prepared.

Congressman Henry W. Watson of Montgomery County has sent a definite acceptance of an invitation to address the meeting and others who are expected are Dr. D. C. Gray, vice president of the Inland Waterways Association, Pittsburgh; James H. Craig, Deputy Secretary of Internal Affairs, at Harrisburg; W. Schoof, secretary and treasurer of the Atlantic Deep Waterways Association, Philadelphia; E. T. Albrecht, president of the Philadelphia Bourse and John K. Stauffer, Mayor of Reading.

WANTS SURVEY OF SCHUYLKILL CANAL

Watson Introduces Bill in House;
Seeking to Restore Utility of
Phila. Waterway

Special Dispatch to The North American
WASHINGTON, March 13.—In hope that the Schuylkill canal between the anthracite districts of Pennsylvania and the port of Philadelphia may be restored to its former utility, Representative Watson introduced into the house today a bill providing for a government survey of that waterway.

The railroad bill recently passed, Representative Watson pointed out, prohibits the extension of railroad lines or the construction of new lines without permission by the interstate commerce commission. This, in Mr. Watson's opinion, will prevent numberless constructive enterprises, which the railroad owners, would undertake. Hence the development of inland waterways is now more necessary than ever.

"If we allow the waterways to be strangled," said Representative Watson, "we enfeeble our commerce and lessen the output of our industries. Waterways may soon become the leading carriers of freight. Associations have been organized for the purpose of reconstructing canals, with government aid. One of them is the Schuylkill Canal Improvement Association, in support of whose efforts to reopen the Schuylkill canal I have introduced this bill."

COAL DUST IN RIVER ILLEGAL BUT THIS LAW NEVER HAS BEEN ENFORCED

1916 REPORT OF STATE WATER SUPPLY COMMISSION SHOWS HOW SCHUYLKILL VALLEY HAS BEEN MARRED.

Harrisburg, July 30 (Special).—

The state water supply commission has not yet received the appeal from the city of Reading asking for action to prevent the Schuylkill River from being further clogged up with coal dust.

In the absence of Thomas J. Lynch, secretary of the commission, no definite statement as to what would be done in the matter could be obtained. It was said, however, that the usual procedure in a case of this kind is to send an investigator to the scene and if he finds conditions such as to endanger the navigation or the health of the surrounding community action will be taken against the parties responsible to discontinue their practice of dumping coal dust into the river and that steps will be taken to remove the sediment in the bed.

In spite of this assertion, there is not much likelihood that any vigorous action to eliminate the evil will be taken. There is a law on the statute books, approved June 27,

(Continued on Eighth Page).

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COAL DUST IN RIVER ILLEGAL

(Continued From First Page.)

1916, which makes it a misdemeanor for anyone to dump, or allow to be dumped, coal dust into the streams of the state. But this law has never been enforced.

STATE HAS NO AUTHORITY.

The reason for this lack of enforcement, as explained in a report prepared by the water supply commission in 1916, is "that to no state department has the duty of enforcement been delegated. More than this," the report continues, "legislation so drastic, affecting as it does the operating conditions of a large and valuable industry, should be interpreted only after thorough consideration and with accurate knowledge of conditions."

"Practical alternatives should be found before the mining companies are forced to discontinue their present practice."

"The act, if rigidly enforced, would perhaps result in benefit to the anthracite region and to riparian owners on the water courses leading therefrom, but it does not provide for purification of streams to such an extent that they could be used for water supply, as it specifically permits the discharge into the streams of mine water carrying sulphuric acid and other impurities."

"Where streams receive sewage, mine water may be beneficial and act as a germicide or neutralizing agent, but where they are pure, both mine water and mine refuse should, so far as possible, be excluded. Mine water, with its acid increment, is unfit for domestic use and steam generation and, near the mine, destroys fish life. Dilution, due to increased volume received from tributaries, reduces the acidity, and each of the rivers into which acid water is discharged passes through limestone areas that exert neutralizing influences."

UP TO THE MINING COMPANIES.

"We recommend the enforcement of the act by alternative methods, in

individual cases, at the option of the mining companies, subject to approval by the water supply commission, and suggest that hydraulic mine filling be adopted wherever geological and mining conditions make it feasible; also that in portions of the field, where the workings are on a pitch too steep to make this practicable, settling basins or other suitable provisions be made to remove the solids, and the effluent then be passed through well constructed filters, as is now the practice at a number of collieries in the Schuylkill region."

"The act, passed by the Legislature after realizing the tremendous waste of natural resources by pollution of the water courses, the damage to farm land and the other consequences of overflow, by material which, if properly used, would increase the ultimate yield of the anthracite fields, provides:

"That it shall be unlawful for any person, partnership or corporation to place or discharge, or permit to be placed or discharged, in or into any of the running streams of this state, any anthracite coal, anthracite culm, or refuse from an anthracite coal mine; or to deposit any such coal, or culm, or refuse upon the banks of such stream, where the same would be likely to slide into or be washed into such stream. Provided, however, that this act shall not apply to waters pumped or flowing from coal mines where the coal or culm or refuse have been removed therefrom; or shall not prevent the discharge of sewerage from any public sewer owned or maintained by any municipality of this commonwealth."

PENALTIES PROVIDED.

"Any person, firm or corporation violating the provisions of this act shall be deemed guilty of a misdemeanor and shall, upon conviction, be punished by a fine of \$100 for each offense, and a further fine of \$50 per day for each day the offense is maintained, or be imprisoned not exceeding one month, or both, at the discretion of the court."

Treating on the general subject of culm in the streams of the anthracite region, the water supply commission's report says:

"From 25,000,000 to 35,000,000 tons of coal are produced annually by what is known as the 'wet process,' a process that has resulted in the most serious contamination of the streams that run through or have their source in the anthracite region of Pennsylvania. In this pro-

CANAL FILLING ABOVE READING

LAST COAL BOAT MAY HAVE PASSED DOWN

Rd. Eagle.
8/12/19

There will be no boating on the Schuylkill canal north of this city this season according to information gathered from sources along that stream. After the hardest kind of work the men employed on the dredge now working between this city and Highs farm, the channel has been opened about three miles above Haines' lock. North of Highs farm the stream is in bad shape, the sand and culm in some places being three feet above the surface of the water. It is claimed that it will be impossible to clear the channel this year. The recent heavy rains clogged up the stream north of Reading and the indications are that navigation may not be resumed above Reading for some time. It seems that every time there is a flood in the Schuylkill conditions become worse. This will be the first season since the opening of the canal that a boat failed to get through.

There is a feeling that the Reading Railway Co., the owner, is not very anxious to open the canal, judging by the small dredging force. It is among the possibilities that the last boat load of coal has passed down the stream. Conditions above Reading get worse every year because of the culm which the coal companies allowed to be washed into the stream.

Those who profess to know say that the canal is profitable even if no boats are operated. The company receives a large revenue from the water rights between this city and Philadelphia.

SCHUYLKILL DRAINS THREE FOURTHS OF COAL FIELD.

"The Schuylkill River, with its principal tributaries, Mill Creek, Norwegian Creek, the West Branch and the Little Schuylkill, drains about three-fourths of the southern coal field. Mine water from an old drift near Tuscarora is the source of the main stream and 11 tributaries above Port Clinton, including every stream of importance, contain sulphur water, while five of them are loaded with culm."

"The Schuylkill River passes out of the coal measures just south of Pottsville. Above Port Carbon the water shed is steep, the channel narrow and the current swift, with little opportunity for the deposit of culm, except in occasional eddies. Below this point the gradient is less, the stream more sluggish and the flood area greater. Between Schuylkill Haven and Reading frequent dams of the Schuylkill Navigation Co. form along stretches of slack water, where culm is deposited."

"In addition to an annual recovery of 60,000 tons of merchantable coal by 17 dredges operating in pools, where the deposits of culm are from six to eight feet deep, quantities of silt are removed by the navigation company in keeping the channels of the canal and river open. Below Reading the water is comparatively clear, except in time of flood, when it is black as far as Philadelphia."

"The flood areas at Schuylkill Haven, Landingville, Auburn, Hamburg and Shoemakersville show deposits of culm in varying amounts on the flats. In some cases the culm has ruined rich farm land, besides filling up the river channel and increasing the flood damage."

duction, about 40,000,000,000 gallons of water carrying 10,000,000 tons of fine culm are discharged into the water courses direct, flushed from the mines, or disposed of by various means on the surface. The extent to which the very small sizes of anthracite have been deposited in the streams draining the coal fields is made evident by the fact that over a quarter of a million tons, designated generally as river coal or culm, are recovered annually from the river beds by coal washing operations.

660 MILES OF WATERWAY USED.

"The contamination of the streams in the coal region has been in progress for more than 50 years, and it is estimated that there are now 660 miles of creeks and small streams which should be available for water supply but which are rendered useless for domestic and manufacturing purposes by the culm and sulphur water from the mines."

"The Schuylkill River from its source to the Delaware River, the Lackawanna River from Forest City to its mouth, the North Branch of the Susquehanna from Pittston to Sunbury, the Susquehanna from Sunbury to Chesapeake Bay and the Lehigh River from a few miles below White Haven to the mouth, carry this weight from the anthracite region, an aggregate distance of 400 miles, subjecting thousands of acres of rich, alluvial flats within the flood zones to serious damage by the disposition of culm, while every year this detrital matter is extending further downstream. The effect of the coal disposition is shown by stretches of formerly rich farm land now abandoned to weeds and brush where such still grow. In some instances the lands are the property of the coal companies, and in a few cases where they are not so owned damages have been paid to the owners."

MINE WASTE AND RUIN.

"In the Hazleton, Schuylkill and other regions, many creeks have been so loaded with culm that they have spread over the entire valley bottoms, killing standing timber and all other vegetation. The beds of the rivers are clogged with mine waste deposited in eddies behind bridge piers and below islands, and pools above dams have become so filled with this material that their efficiency is impaired."

"The presence of mine waste in water courses is due to two causes, both within the control of the mining companies:

"First—The disposition of culm

and mine waste on low ground where it is subject to overflow and is washed into the streams by the swift current of spring floods. This has been such a common practice along the Lackawanna River for probably 50 years that the stream bed is filled with mine refuse to a depth of from two to six feet, and a bar has formed at its mouth that extends over 300 feet into the Susquehanna River for a half mile downstream."

"Second—The discharge into the streams of culm bearing water from the coal washing operations, from which much damage resulted during earlier years when most of the slush passed into the nearest watercourses, a practice generally followed until the value of much of the material previously thrown away was discovered."

"This mine waste, when properly handled and placed, is of value to the mining industry in extinguishing mine fires, arresting "squeezes" and protecting the surface from "caves," thus increasing the ultimate yield. Some companies are either flushing this waste material into mines or storing it on the surface for future use, but the streams are still receiving a quantity sufficient to render them useless for water supply, to impair their value for manufacturing purposes and to fill up their channels so that overflow is frequent."

FLOOD SEASON WORST.

"Along the smaller streams, where the current is rapid, the water is black and the culm is carried in suspension and deposited in the larger creeks and rivers, but where the flow is sluggish, culm settles quickly and is carried to the main watercourses only during freshets. For this reason streams that at low water are most clear may carry a large quantity of culm in times of high water and do more local damage to surrounding territory than those which regularly discharge their burden into the rivers. Frequently during floods the great deposits that have been accumulated at the mouths of tributaries are washed downstream."

"It is probable that the Schuylkill River may not be fit for use in the next 150 years."

As regards the Schuylkill River in particular, the report states:

SCHUYLKILL CANAL ONCE A PAYING PROPOSITION

Reading Eagle 1/18/20
SHARES, \$50 PAR, SOLD FOR \$180
IN ITS PALMY DAYS

Statistics which show that in days gone by the Schuylkill canal was a well paying enterprise have been embodied in a brief history of the canal prepared by J. W. H. Glass, chairman of the executive committee of the Schuylkill Canal Improvement Association, which next Wednesday, Jan. 21, will hold its first annual one-day convention at the Berkshire Hotel, Reading.

Mr. Glass declares that at one time stock in the company, which had a par value of \$50, sold for \$175 and \$180 and that the dividends were large.

WILLIAM PENN'S IDEA.

His article follows: "Over 130 years after William Penn suggested the idea of canalizing inland waterways, the Schuylkill canal was completed and put into successful opera-

tion. That event marked the first completed navigation enterprise in the country. Although the Union Canal Co. of Pennsylvania, was chartered April 2, 1811, nearly four years before the Schuylkill Canal and Navigation Co., it was not completed until 1828, six years later than the Schuylkill. Through her enterprising and public spirited citizens, these great internal improvements in this country were projected in Pennsylvania."

"The success of the Schuylkill Canal gave an impetus to other improvements. The popular will necessitated Gov. John Andrew Shultz, of Berks county, to yield to a loan of \$6,000,000 before the close of his second term.

EARLY CONSTRUCTION.

"The energy and aggressiveness which the commissioners showed made possible the early construction

of the canal. Incorporated on March 8, 1815, subscription books were opened on May 1, 1815. The par value of a share of stock was fixed at \$50, with Reading subscribing one-quarter of the total shares of \$500,000. The construction of the canal was begun in 1817 and completed in 1822.

"The total length from the coal regions to Philadelphia was 105 miles, 62 miles of canal and 43 miles of pool in river, with a fall of 588 feet, including 120 locks, 81 above Reading and 39 below; 28 dams and 17 arched stone aqueducts. The total cost was \$1,800,000. In 1827-28 the canal was extended, and by an enlargement in 1846, the number of locks was reduced to 71, with a total fall of about 620 feet. The size of the locks was 18 by 110 feet; three width of canal, 60 feet, depth of water, six feet. The capacity of the boats was 180 tons.

"Rapid strides were made. From having boats towed by men, then drawn by one horse, in 1824, to steamboats in 1826, and steam packets in 1846, were notable steps in the development of the canal.

"With man power locomotion a trip from Port Carbon to Philadelphia and back generally required six weeks; in 1858 a trip from Port Carbon to New York and return was made in seven days.

TRANSPORT COSTS CUT.

"By means of the canal, cost of transportation was greatly reduced. From 40 cents per 100 weight by land, from Reading to Philadelphia, the cost was reduced to 12½ cents by canal. Traffic gained greater proportions from year to year. In 1826 the total tonnage descending was 25,561 and ascending 6,843, with total tolls received \$43,108. Five years later, in 1830, the total descending was 136,531 tons, ascending 44,254, with total tolls \$148,165.

"Various commodities were transported over the canal, lumber, grain, flour, coal, iron ore, iron, whisky, etc. With ever-increasing traffic ample dividends were made, and shares, which cost originally \$50, were sold as high as \$175 and even \$180.

"In 1842 over 500,000 tons passed down the canal and the tolls were over \$400,000. In 1851 the total tonnage was 842,097 tons, of which there were 579,156 tons of coal, and the total toll was \$285,621. After 1861 the canal tonnage reached 1,400,000 tons of coal and 300,000 tons of merchandise and other articles. The capacity of the canal is estimated at 1,800,000 tons descending and at least 500,000 tons ascending.

COULD SAVE MILLIONS.

"It can readily be seen that millions of dollars can be saved by transporting of coal alone. With the Schuylkill canal navigable and in service it would materially aid in the reduction of the high cost of living, relieve congestion of the railroads and afford the government ready means of safely loading vessels with coal in time of war, or maritime and shipping expansion.

"The Schuylkill Canal Navigation Co. continued to operate this great enterprise till 1870, then they leased it to the Philadelphia and Reading Railway for a term of 999 years, with the result that gradually efforts are now being made by the company to abandon the canal and its usefulness.

PROSPECTS FOR CANAL BRIGHT

Ridg. Herald Telegram 1/29/20
GLASS TALKS TO M. C. S'

J. W. H. Glass returned from Washington full of enthusiasm as to the possibilities of again having the Schuylkill canal in full operation.

There were hearings on several bills before the house river and harbor committee, touching on this question. One carries with it an appropriation of \$18,000,000 annually for 5 years and would be used to provide better facilities on the canals in the eastern section, including the Schuylkill.

\$10,000 FOR A SURVEY.

The Watson bill was also given a hearing. This carries a provision of \$10,000 for a survey of the Schuylkill canal, to determine the cost of providing a channel to accommodate barges requiring 10 feet of water. This bill seems almost sure of adoption.

City solicitors of cities to be benefited will have a conference shortly and take the subject to the public service commission, which will be asked to compel the railroad to conform to charter requirements or allow the state to take possession.

HOW IT WILL BENEFIT.

At the meetings of the committee Mr. Glass was the main speaker. He told of the advantage and improvement the section along the canal would realize if the proposition carries. He declared it would assist materially in bringing down the high cost of living. It is not the purpose of the movement to fight the railroads, but to supplement them.

Had the canal been navigable, he declared, there would have been fewer disastrous results from the railroad strike felt in this section. The industries would not have been inconvenienced as greatly as they were. The project, he declared, would benefit the whole eastern part of the country.

The idea is that bulk freight at a low rate will be handled by the canal, leaving the better grade of freight to the railroads.

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HISTORICAL ASSOCIATION
Port Clinton, Pa. 19549

ERALD, FRIDAY, FEBRUARY 9, 1923



UP AND DOWN MONTGOMERY COUNTY

Manayunk Bridge Disasters Of Bygone Years

While not so venerable in aspect as the DeKalb street bridge, nevertheless the Manayunk bridge has been declared an antique of uncertain stability. A Montgomery County grand jury, in September, 1921, urged that it be replaced with a new structure. And now a bill has been introduced in the City Council of Philadelphia making provision for the cooperation of the city authorities with the Commissioners of Montgomery County in building a new bridge over the Schuylkill at Manayunk.

The first Schuylkill River bridge touching Montgomery County was built at Manayunk in 1810. This was also the second Schuylkill River bridge touching Philadelphia and Montgomery County. But that bridge of 1810 did not stand where the bridge now stands. The present bridge is at Greenlane. The first bridge was about a mile farther up the river, and was called the Flat Rock bridge. It was a half

Part of the Flat Rock bridge collapsed in 1824 under the weight of several wagons hauling marble from the Whittemarsh quarries. It was rebuilt, and just as it was nearly completed a freshet occurred and piled such a mass of logs, trees and other debris against the bridge that the structure was carried down the stream. Once more it was rebuilt. This time it stood until the great freshet of 1850, which swept away the Conshohocken bridge. The bridge went down the Schuylkill almost intact and the collision with the Flat Rock bridge wrecked that structure. It was not replaced.

In 1833 the first bridge at Greenlane was built, it being constructed by a corporation which derived a revenue by the collection of toll from passengers crossing the bridge. The spot where the bridge was located had been a ferry from the time of the first settlement of

the region, the road on the west side leading toward the Welsh settlements of Merion. From the name of an early landowner it was called Righter's ferry.

The freshet of 1850, which wrecked the Conshohocken and the Flat Rock bridges, also caused great damage to the Greenlane bridge. A covered bridge was then built, and this remained until swept away in a great flood in 1869. The swift water carried a canalboat-load of coal out of the canal at Manayunk and hurled it against the bridge, which tumbled down into the water. A boy, the only person on the boat, perished.

The bridge built after the disaster of 1869 was freed of tolls in 1892, and since then Philadelphia and Montgomery County have been the joint owners.

Several times within the past twenty years it has been proposed to build a bridge over the Schuylkill some distance north of Manayunk, for a direct route between Lower Merion and Chestnut Hill. The Manayunk bridge is not convenient for this purpose owing to the high hills on the Manayunk side, which so far have prevented the construction of roads appealing to long-distance motorcar travelers. From Lower Montgomery County to the Chestnut Hill and Germantown region of Philadelphia, motorcars bound for Lower Merion must either go south to the Falls of Schuylkill Bridge or north to the Conshohocken bridge. It was understood some years ago that Dr. George Woodward and other members of the Houston family, who own much land in Whittemarsh, Springfield and Chestnut Hill, were ready to contribute a large sum of money toward the construction of a bridge as part of a scheme for a boulevard connecting Chestnut Hill and Lower Merion.

NORRIS.

RISTOWN TIMES HERALD, TUESDAY, FEBRUARY 3



A New Bridge at Old Levering's Ferry

Philadelphia is now about ready to proceed, in co-operation with Montgomery county, in building a modern concrete bridge on the site of the Greenlane bridge over the Schuylkill at Manayunk. Negotiations as to this improvement have been in progress between the city and the county for four years.

The present steel truss bridge, built in 1870, is the third on this site and the fifth at Manayunk. The first bridge was built at Flat Rock, a mile north of Greenlane. That was in 1810. Following its destruction by a freshet, in 1824, the bridge had to be rebuilt. Another freshet in 1850 carried away this bridge and it was not replaced.

Meanwhile the borough of Manayunk had come into existence, on the northern banks of the Schuylkill, below Black Rock. Manayunk's development was due largely to the opening of the Schuylkill canal, a century ago. The name, an old Indian term originally applied to the Schuylkill river, was adopted in 1824, and in 1847 the community became a borough.

The first bridge at Greenlane was erected in 1823. Floods in the river, in 1850 and 1869 necessitated rebuilding. Tolls were collected until 1892.

Like most bridges over the Schuylkill, the Greenlane bridge was erected approximately at the site of an old ford and ferry. Levering's ferry, it was called, from a family that owned much land hereabouts, on both sides of the river.

Two brothers named Gerhart and Wichert Levering were the pioneer settlers of Roxborough township, which embraced the territory now included in Manayunk. It is said

that these two were members of a family of twenty-one brothers, and that Wichert Levering lived to the age of 109 years.

The road in Lower Merion township that in early days led down to this ford and ferry was called Levering's Mill road. It was one of the first roads authorized by the courts of Montgomery county following the organization of the county, in 1784. Anthony Levering, in 1785, petitioned the court from the laying out of a road from Levering's ferry, past his mill to the Lancaster road, and the court complied with the request.

However, maps of an earlier date show a road leading down to the river at this spot, and it is said part of Washington's army crossed at Levering's ford and marched southward over this road through Lower Merion, on September 14, 1777. This was after the battle of Brandywine, when the army left its camp at Falls of Schuylkill with the hope of thwarting the efforts of the British to gain possession of Philadelphia.

Fragments of Levering's Mill road still have that name in Lower Merion, but the road no longer runs down to the Schuylkill, as it once did. The highway connecting with the Greenlane bridge, on the south side of the river is now called Belmont avenue.

A mile or so farther down the river City Line bridge marks another ancient road and ferry, but here also the old highway retaining the name of this landmark, namely, Righter's Ferry road, no longer finds its way down to the river. A road from Righter's ferry to Merion Meeting House was opened in 1706, and the ferry was authorized in 1741.

NORRIS.

FLOOD CONTROL PLANS DRAWN FOR SCHUYLKILL

\$1,000,000 PROBABLE COST OF MAKING
READING SAFE FROM HIGH
WATER DAMAGE

Rdg. Eagle

8/27/19

Harrisburg, Aug. 27 (Special).—That the expenditure of \$1,000,000 would be required to afford Reading complete protection from flood damage, is the statement contained in suggestions for flood control plans for the Schuylkill River, issued by the state water supply commission.

Recently an engineer of the commission came to Reading and, accompanied by City Engineer Ulrich and other city officials, toured the river from above the north city boundary to below the southern city line. His report, which is highly illuminating, has just been given out.

Building of a concrete wall along the east bank of the river through Reading, the abandonment of the canal through the city, or the building of an earthen levee along the east bank are some of his suggestions.

Mayor Filbert Starts Movement.
Mayor Filbert precipitated the campaign to make safe the Schuylkill at Reading so that his city would be free from flood damage. He reported the matter to the commission and the latter took it up promptly. The mayor noticed the

manner in which the river was filling with coal dirt and culm.

The report of the commission follows:

The Schuylkill River at Reading has a drainage area of about 900 square miles, consisting largely of mountainous country. The mean annual rainfall is about 45 inches. In intensity and frequency of storm rainfalls this area very closely resembles southern Ohio, Indiana and Illinois. More or less dependable high water marks have been preserved of the more important floods for more than a hundred years.

During the recent years accurate records of flow have been kept, and from these and from a knowledge of the characteristics of the river, estimates have been made of the discharges of the most important floods. The highest on record was that of September, 1850, the discharge of which is estimated to have been 80,000 cubic feet per second. In October, 1869, and on the last of February, 1902, floods occurred which reached within two feet of this extreme stage. The discharge on these occasions is estimated to have been about 70,000 cubic feet per second. The estimates of these early floods are probably much in error, but an examination of the topography of the watershed, and of the storm rainfall characteristics of the region lead me to believe that a flood might occur at Reading of 90,000 to 100,000 cubic feet per second, but that such floods would be very rare.

FLOODS 30 CITY BLOCKS.

A flood like that of 1902 inundates all or parts of more than 30 city blocks, most of which are closely built up, and also covers many miles of main and side tracks of railroad.

AGAINST DAMS AND RETARDING BASINS

Harrisburg, Aug. 27.—A series of suggestions for prevention of floods at Reading, prepared at the request of the mayor, was made public today by the state water supply commission, recommending changes in the Schuylkill River and other streams and along banks, which would cost from \$500,000 to \$1,000,000.

Control by dams and retarding basins is dismissed as impracticable by the commission, which states that some of the best sites are occupied by railroads. The Tulpehocken, which enters the Schuylkill at Reading, is well adapted for dams, but its drainage area is not extensive and it would be more valuable for water storage for industrial purposes. Straightening of the river below Reading also would be expensive.

The methods of flood control, which appear feasible, are given in the report as enlargement of the river channel by excavation, construction of a concrete wall along the east bank of the river, construction of a levee along the east bank and a combination of the three methods.

Within the city, a flood two or three feet higher than this, which may occur, would cause a great deal more damage. Quite generally, a city in such a situation must actually go through the experience of a great flood before it will take account of its interest and be willing to pay for the necessary protection.

"In working out plans for flood prevention, sometimes the problem is very much simplified by the fact that only one method of improvement is possible. In other cases several entirely feasible methods present themselves, any one of which can be followed at an expense that is fully justified.

"Floods on the Schuylkill River at Reading can be controlled by either of two or three methods, and careful and detailed surveys and studies will be required to determine finally which is best and least costly. Any method of flood control will be expensive, and may cost more than would seem at present to be justified by the interests involved.

RETARDING BASINS IMPRACTICAL.

"Control by dams and retarding basins may be dismissed at once as impracticable in this case. Most of the best sites for dams and for storage areas are occupied by railroads. The Tulpehocken Creek entering the Schuylkill from the west at Reading has apparently excellent dam sites and storage areas that are not occupied by expensive improvements. This stream doubtless can be completely controlled by dams, but its drainage area is only 200 square miles, as compared with 900 square miles for the Schuylkill at Reading, so its control would only partially solve the problem. The control of this one stream by a dam and retarding basin probably would cost more than complete flood control for the city by other methods. The Tulpehocken Creek would, however, furnish valuable water supply storage, if it should be needed for industries in or below Reading.

An examination of the map suggests a straightening of the river by cutting off two bends just below Reading. Such a straightening would eliminate the need for four large railroad bridges, but would require two very deep cuts, one of more than 100 feet. They would cost more than

HAS HOPE FOR SCHUYLKILL CANAL

Mr. Glass Returns From Washington in Behalf of Project

Rdg News-Times 4/29/20

J. W. H. Glass returned from Washington full of enthusiasm as to the possibilities of again having the Schuylkill canal in full operation.

There were hearings on several bills before the house river and harbor committee, touching on this question. One carries with it an appropriation of \$18,000,000 annually for 5 years and would be used to provide better facilities on the canals in the eastern section, including the Schuylkill.

The Watson bill was also given a hearing. This carries a provision of \$10,000 for a survey of the Schuylkill canal, to determine the cost of providing a channel to accommodate barges requiring 10 feet of water. This bill seems almost sure of adoption.

City solicitors of cities to be benefited will have a conference shortly and take the subject to the public service commission, which will be asked to compel the railroad to conform to charter requirements, or allow the state to take possession.

How It Will Benefit.
At the meetings of the committee Mr. Glass was the main speaker. He told of the advantage and improve-

ment the section along the canal would realize if the proposition carries. He declared it would assist materially in bringing down the high cost of living. It is not the purpose of the movement to fight the railroads, but to supplement them.

Had the canal been navigable, he declared, there would have been fewer disastrous results from the railroad strike felt in this section. The industries would not have been inconvenienced as greatly as they were. The project, he declared, would benefit the whole eastern part of the country.

The idea is that bulk freight at a low rate will be handled by the canal, leaving the better grade of freight to the railroads.

Would Not Oppose.

Washington, D. C., April 28.—"The Reading Company will not oppose the effort being made for the improvement of the Schuylkill river and canal," is what President Dice, of the P. & R. Company, has told Congressman Watson, of the Pottstown-Norristown district.

Congressman Watson said that the statement was made to him at the Reading's general offices in Philadelphia, where he went to find out how the Reading Company stood on the proposition, and he thought that this should be a great factor in the forwarding of the Schuylkill canal improvement association's movement for with the Reading Company not opposed to the project, there is every likelihood that the Pennsylvania will take a similar stand, and thus with the two railroad companies not objecting, one of the greatest stumbling blocks in the way of the government's attitude is thus removed.

DREDGING NEEDED TOO.

"Along part of the east bank of the river through the city there is room to construct a levee without interfering with canal or railroad. The improvement might consist of an earth levee where there is room and of a concrete wall where the canal is very close to the river bank. Probably a limited amount of channel improvement by dredging would enable such a combined improvement to be carried out with further economies.

"The comparative economy of these different methods can be determined only by comparisons following careful examinations of foundation material for concrete walls, of the possibility of disposing of excavated earth, of the possibility of displacing or moving the canal, of the cost of right of way, and of other items. It is probable that complete protection by any method will cost not less than half a million dollars, and it is quite probable, judging from a preliminary examination, that complete protection can be secured for not to exceed a million dollars."

HE SEES THE POINT

But Clear Water From Schuylkill Surprises Judge

Special to The Inquirer.

POTTSVILLE, Pa., April 15.—Judge Johnson, of Union county, who is specially presiding here was much surprised today in the Court when he was shown a sample of water from the Schuylkill River clear as crystal. The Judge, accustomed to see the river here as black as the Styx, due to the mines, inquired as to the cause of the "miracle."

G. H. Gerber, counsel for W. H. Fahl, who is suing the Philadelphia and Reading Coal and Iron Company for damages due to culm washings explained:

"This is a specimen of water taken from a colliery where proper precautions are being taken to keep coal dirt out of the river. They say they can't do it; this shows they can."

"I see the point," said the Judge.

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Port Clinton, Pa., 19549

TRI-STATE PACT TO GIVE CITY BIG WATER SUPPLY

Public Ledger - 1/26/25
Billion Gallons Daily From Delaware River Apportioned to This State, Jersey, N. Y.

240,000,000 GALLONS EXTRA THIS CITY'S ALLOTMENT

Treaty Just Signed Involves an Expenditure of \$500,000,000 in 100 Years

A treaty apportioning the waters of the upper Delaware River for the use of Pennsylvania, New Jersey and New York and providing for a daily water supply of a billion gallons to each has been signed by representatives of the three States, acting as the Delaware River Treaty Commission.

The compact calls for the conserving of the flow of the stream by the erection of dams, which will also make available a vast amount of power for commercial development.

The signing of the treaty was announced in New York last night by George MacDonald, chairman of the Joint Commission. The compact must be ratified by the Legislatures of the three States.

Dr. Charles H. Miner, Secretary of Health of Pennsylvania and chairman of the Pennsylvania section of the Joint Commission, said at Harrisburg last night that the operation of the treaty would increase the supply of water available for Philadelphia 240,000,000 gallons daily without the expenditure of any additional money by the city. The city now uses approximately 350,000,000 gallons daily.

Manner of Allotment
The water which flows in the channel of the Delaware River at the point where the three States meet has been allotted equally among them and the water flowing in the river south of that point is divided equally between Pennsylvania and New Jersey.

The treaty involves the ultimate expenditure of \$500,000,000 in the next 100 years.

Operation of the treaty is expected to eliminate water shortages and floods in New Jersey. The low flow of the Delaware will be increased and summer conditions will be greatly improved. Trenton will get relief from the present pollution of its water supply taken.

The volume of water which the treaty would make available to each State is about equal to that which the City of New York draws from all its sources of supply.

The plan has been under discussion two years or since the Legislatures of the three States provided for the joint commission.

The Treaty Commission consists of George MacDonald, Rudolph Reimer and Jefferson Demont Thompson, for New York; Dr. Charles H. Miner, Major Robert Y. Stuart, Secretary of Forestry; Philip F. Wells, Deputy Attorney General, for Pennsylvania, and Colonel William A. Starrett and Frederick C. Schneider, for New Jersey.

Benefit for This State

"This compact," said Dr. Miner last night in Harrisburg, "is a decided benefit to our State, for it allows dams to be built across the Delaware River. This will allow commercial development of the potential energy now going to waste. It also grants the rights of a dual use of power developments on our own streams by allowing the water so developed to be taken from the Delaware River at a lower point for municipal use."

"The City of Philadelphia is using about 350,000,000 gallons of water a day. We can, under the compact, increase the quantity which can be pumped from the Delaware River 240,000,000 gallons a day without the expenditure of any additional money and without interfering with the power development. Other power projects are pending, and under the compact each will produce the same result until a total additional supply of 1,000,000,000 gallons of water a day is easily possible."

"The compact provides for the construction of dams across the Delaware River, and it may become of great importance to our giant power development."

Chairman Starrett's View
Chairman Starrett, of the New Jersey Commission, said:

"The terms of this compact solve the great need of an available water supply for the cities of New Jersey. It makes available immediately approximately 1,000,000,000 gallons of water a day and places our cities in safety for the next 100 years."

"Under the terms of the compact we can divert this water to the use of any of our needs. In our North Jersey Water District we are using virtually all of our available supply, which aggregates 250,000,000 gallons of water a day, of which Jersey City requires 60,000,000 a day and Newark requires about 50,000,000 gallons a day; and we have less than 10 per cent leeway at the present time. All of the Delaware River water can be diverted to any part of the State, and with this compact in force, all our fears of a water famine are in the dim and distant past. The sanitary requirements of the compact require a full regulation of the entire drainage basin."

MEN

WOMEN WILL FIGHT FOR RIGHT TO SWIM

Evening Ledger 6/23/25 ONS AT
Manayunk Mermaids Incensed
by Order Barring Them
From Canal Plunge

DROP 'S' FROM 'NO SWIMMIN'

No more shall the mermaids of Manayunk make merry in the Manayunk canal at the end of their day's toil.

At least, an order has gone forth that swimming will not be permitted in the stream. The proclamation was issued by the Schuylkill Navigation and Transportation Co., of the Philadelphia and Reading Railway.

But the girls are not overawed in the least by the length of that name, and are circulating a petition urging that the company let down the bars depriving them of their nightly plunge. This petition already has several hundred signers.

Lieutenant Taylor, of the Manayunk police, says swimming in the canal is forbidden on account of an order from the transportation company. But W. B. Nissley, superintendent of the company, said the ruling was issued at the request of mill owners and property owners whose estates edge the canal at Manayunk Beach. Several mill owners have denied making such a request. And the fair bathers are in a quandary. Some of the girls declare they will swim in the canal and make a test case of the matter.

The privilege of swimming in the canal last year was obtained, it is said, through the aggressiveness of Harry H. Anderson, a former Vare councilman. An appeal will be made to William Preston, administration leader in Manayunk, by the girls. In view of the fact that women expect to vote soon in Pennsylvania they believe he will do his best in the new wet or dry controversy.

Today some one put up a sign on the canal bank announcing: "No swimmin' allowed." It was up but a few minutes when a boy painted out the letter "S."

Property of HISTORICAL ASSOCIATION

Port Clinton, Pa. 19549

TO NOTE OPINION ON CANAL OPENING

Association May Call for Resumption on Pain of Action Against Canal Charter

The point of whether the business public of the Schuylkill Valley from Pottsville to Philadelphia wants the old Schuylkill canal restored to service is likely to be determined in the next few weeks. At a meeting of lawyers in Reading it was decided to test sentiment among shippers of bulky freight and other business men to learn if there is really a substantial need for the waterway. The canal is the property of the Reading Railway Company, holding it through the Schuylkill Navigation Company, and it is keeping some of the old boats in repair, although there is virtually no traffic at present. The locktenders are nearly all kept in service, but the channel is so choked with coal culm at places that getting a loaded boat through would be almost impossible.

The Schuylkill Canal Association, if it finds a real demand for the restoration of the waterway, will call on the company to resume traffic, under the penalty of having application made to the state for the revocation of the charter. Many business interests are apathetic. Some communities are actively boosting the canal restoration movement, and the aid of both federal and state governments has been solicited in an effort to have the canal surveyed to test its desirability as part of an inland waterway system of the future.

Counsel at the meeting in Reading included: R. R. Michelson, of Philadelphia; John Haviland, of Phoenixville; Gilbert Rodman Fox and John Brumbach, of Norristown; Wellington M. Bertolet, of Reading; R. Reed, of Royersford and others. J. W. H. Glass, of Reading, chairmen of the canal association executive committee, took part in the meeting.

U. S. MAY AID CANAL BOOM

Rdg. Eagle 11/18/19

SCHUYLKILL ON LIST IN A NEW FEDERAL BILL

CONGRESS ASKED TO GIVE 100 MILLIONS A YEAR FOR FIVE YEARS TO REOPEN COAL AND OTHER CANALS.

The Reading Chamber of Commerce and businessmen generally are interested in the inland waterways convention at Washington on Monday, Dec. 8. They may be represented there because of the prospect of the old Schuylkill Canal being reconstructed as a coal and other freight carrying medium, with government backing for the project. This plan has been included in a bill to provide a large federal appropriation for the renovation of canals and important streets that could be used for carrying freight if deepened and kept clean.

The meeting in Washington on Dec. 8 will be preceded by a session at the Washington Hotel of the Mississippi to Atlantic internal waterways committee, called by Chairman W. H. Stevenson and Secretary Burd S. Patterson. The purpose of the convention is to consider the House of Representatives' bill providing an appropriation of \$100,000,000 a year for five years to construct, acquire and improve a nation-wide system of waterways within that period. The work suggested must have the approval of United States engineers.

Includes Schuylkill Canal.
State Auditor General Charles A. Snyder, of Schuylkill county, will be one of the leading speakers at the convention from Pennsylvania.

The bill to be considered was introduced in the lower House of Congress on June 28 last by Congressman G. E. Campbell, of Pittsburgh. Among its provisions is an appropriation of \$13,000,000 for Atlantic intercoastal canals, under which would likely come the reconstruction and reopening of the Schuylkill canal, if that project is given serious consideration after the bill becomes a law.

The main purpose of the convention is to unite all waterways organizations of the country in support of the Campbell bill. Senator Joseph E. Ransdell is one of the speakers, and there will also be addresses by the presidents of the various waterways organizations. There are many businessmen in the Schuylkill Valley who are strongly of the opinion that the reopening of the Schuylkill canal would prove a profitable venture and afford a means of transportation for reaching communities which are not now touched by railroad lines. The coming convention will afford such an opportunity to push their project, and if there is teamwork among all cities and boroughs in the Schuylkill Valley something tangible in the way of reopening the canal may be the outcome.

Port Clinton the Terminus.
Burd Patterson, Pittsburgh lawyer, historian and newspaper writer, was in Pottsville for the past several days consulting with citizens, and it is believed by some that the reopening of the canal now is only a matter of a short time.

The coal companies have flooded the canal with culm so systematically for a number of years past that now the few boats which are loaded come no nearer to this region than Port Clinton, which is 15 miles below the coal belt. It is entirely practical to reopen the canal again to the coal region and make transportation cheap and efficient.

The plans for the reopening of the Schuylkill Canal, along with other inland waterways, has the endorsement of the state Chamber of Commerce, of Mayor-elect J. Hampton Moore, of Philadelphia; Gov. Sprout, Auditor General Snyder; Frank C. Reese, of the Anthracite Consumers' League, and other prominent citizens.

It is believed the results in the Schuylkill Valley of the opening of the Schuylkill Canal to public traffic again would be as gratifying as in the Pittsburgh district, where the government spent seven million dollars on the Lake Erie and Pittsburgh canal systems. The result was that during the war, when transportation facilities were blocked, and the railroads unable to handle the public business, the canals carried 25,000,000 tons of coal at a saving of \$10,000,000, as compared with rail rates, and 6,000,000 tons of other material at a saving of \$4,000,000, or a total of \$14,000,000, which was twice the amount spent by the government in the enterprise. This coal kept Pittsburgh's great industries going during the war and helped them to turn out their share of the 60 per cent. of the nation's war munitions furnished by Pennsylvania.

Could Supply Large Cities.
The scarcity of coal during the winter months in Philadelphia and New York, due to the inability of the railroads to carry sufficient fuel, would undoubtedly be obviated if the Schuylkill Canal is reopened and rejuvenated.

Frank C. Reese, of the Anthracite Consumers' League, says the opening of the canal furnishes the best practical scheme for the lowering of the price of anthracite in Philadelphia without affecting the wages of miners.

IN TIME OF WAR OR PEACE

Whereas by reason of transportation through the proposed improved Schuylkill Canal the congestion on the Pennsylvania and the Reading Railways would be relieved, and

"Whereas, The late war has taught us the necessity of increased and varied modes of transportation, and

"Whereas, The proposed improved Schuylkill Canal, by reason of its locality and inland position affords safety to its cargoes and immunity from attack by enemy vessels should they by perchance enter our waters, and

"Whereas, The transportation of said cargoes could be handled proportionately with considerable less manpower and expense than transportation by rail or any other means of transportation, thereby affording considerable saving of monies and permitting the use of manpower thus saved toward other important and essential purposes, and

"Whereas, in peace times, by reason of low cost of transportation through the said Schuylkill Canal, a reduction could be afforded on the price of fuel and other essentials.

Therefore, be it resolved that the Schuylkill Canal Improvement Association do hereby indorse the proposed improvement of the Schuylkill Canal and beseech your honorable body to recommend favorably the passage of H. R. No. 6852, now or about to be presented, and thus serve the interests of our government, the United States of America."

TELLS OF VALUE OF THE CANAL COULD CONVEY 3,600,000 TONS OF FREIGHT

AdqEads. — Apr 28 1920

J. W. H. Glass, first vice president and chairman of the executive board of the Schuylkill Canal Improvement Association, appeared before the committee on rivers and harbors of Congress in the interest of the Watson bill, to authorize the secretary of war to cause a survey to be made of the Schuylkill canal and appropriating \$10,000 to pay the expenses.

Mr. Glass was the principal speaker in behalf of the bill. He pointed out the importance of the canal in case of war emergency for the transportation of coal in barges from the mines to tidewater. He said that it would prevent a congestion of traffic, since transportation is of vital importance to the country. Mr. Glass told the congressmen it was not the intention to fight the railroads, but supplement them by using the canal for coal, iron ore and other bulky freight, and thereby leaving the railroads for the conveying of perishable goods, clothing and other freight that requires quick service. He also contended that the canal as it is now, is a menace to health and the proposed improvements included the purification of the water that is now used to a great extent for domestic purposes at Philadelphia and other points.

What It Could Do.

Mr. Glass made a statement concerning the tonnage of the canal as it would be if made navigable for traffic. With a single lock system, he said, 3,600,000 tons of freight could be transported during the canal season, and with double locks, twice that amount.

Presiding Chairman Dempsey and other members of the committee asked Mr. Glass a number of questions, all of which he answered to their satisfaction. He said they appeared to regard the project favorably and he believed they would report back the bill with an affirmative recommendation.

The Schuylkill canal is included in the Campbell bill, which provides an appropriation of \$18,000,000 annually for five years for the acquisition, improvement and construction of Atlantic intracoastal canals.

Mr. Glass was accompanied to Washington by officers of the association from Pottsville, Phoenixville and other places in the Schuylkill Valley. Officials of the Department of Internal Affairs of the state were present. Mr. Glass thinks the pros-

PECTS

CHARACTER

(Special Staff Correspondent)

WASHINGTON, D. C., April 28th— "The Reading Company will not oppose the effort being made for the improvement of the Schuylkill River and Canal," is what President Dice, of the P. & R. Company, has told Congressman Watson, of the Pottstown-Norristown district.

Congressman Watson said that the statement was made to him at the Reading's general offices in Phila., where he went to find out how the Reading Company stood on the proposition, and he thought that this should be a great factor in the forwarding of the Schuylkill Canal Improvement association's movement, for with the Reading Company not opposed to the project, there is every likelihood that the Pennsylvania will take a similar stand, and thus with the two railroad companies not objecting, one of the greatest stumbling blocks in the way of the Government's attitude is thus removed.

In the hearing before the Rivers and Harbors Committee of Congress based on the bill presented by Congressman Watson of the Pottstown and Norristown districts there was much valuable information obtained from the work of George M. Lehman, Engineer of the Dept. of Internal Affairs of the State of Pennsylvania.

Mr. Lehman's map showing the entire Schuylkill Canal location from the suburbs of Philadelphia to the suburbs of Pottsville, depicting how the coal was put on the boats, in the early days, at Port Carbon, Mount Carbon and Schuylkill Haven and Port Clinton, and also, showing the entire lock system, until the transportation of the coal reached the Delaware River at Phila., from whence extensions of the Canal transportation were made to New York and other adjacent waterway terminals, was very interesting and was largely the basis of the consideration of the bill as to whether the Government would or would not order a new survey to be made, or accept the old one, or decide whether or not Schuylkill Canal projects should be considered at the same time as the general Inland Waterways systems application for appropriation and ultimate Government supervision and rehabilitation.

Mr. Craig declared that the state did not want anything else to be done to the Schuylkill River and Canal any more than necessary to the waterways in other sections where business was congested; he declared his belief that the time would come when at Pottsville, Reading and Phoenixville and all the way from Norristown to Manayunk and Conshohocken and Phila., that much if not all of the Schuylkill Canal and the Schuylkill River area must not only be needed for water transportation, but also would be largely utilized overhead by elevated transportation system, and as an illustration he said that from one to five percent. of the rivers' and canals' overhead area was already utilized in the vicinity of the larger cities by elevated structures for transportation and manufacturing purposes, and that the future would see this largely added to.

COUNCIL TO ACT ON CANAL ASSOC'N PLAN

Norristown — 1/19/20
Likely to Select Representation at
To-Morrow Night's Meeting

Among the matters to come before the Norristown Town Council, tomorrow evening, at the adjourned meeting to be held at 7:30, aside from the naming of the committees

pects for the improvements to the canal, now that the rivers' and harbors' committee has been made familiar with them, are excellent.

The Schuylkill Canal Improvement Association to be held at the Hotel Berkshire, Reading, on Wednesday.

A formal invitation has been extended to the municipality to take a part in the movement under way looking towards the re-establishment of traffic on the Schuylkill Canal through securing an appropriation from the government for the reconstruction work that will be necessary to make the old waterway again navigable from the headwaters.

Municipal officers of the borough are much interested in the matter, by reason of the advantage that there will accrue to the business and industrial interests of the community through the resumption of activities on the canal.

It is likely that the Manufacturers Association will also send representatives to the gathering.

Conshohocken business interests as well as the municipality will be represented by Richard H. Bate, Sr., the veteran financier of that borough.

THE READING CO. WON'T OPPOSE OPENING SCHUYLKILL CANAL

Pottsville Republican 4/27/20.

James H. Craig, Deputy Secretary of Internal Affairs of Penna., said that the keystone state, at the direction of Governor Sproul, and his cabinet, was instituting the more general utilization of its waterways, from the tiniest rivulet to the great river and lake facility, and that each succeeding year and that the state would hereafter insist on protecting its water rights for the benefit of all of the people instead of permitting them to be obliterated as competition, and from being absorbed

The application for a survey of the Schuylkill River and Canal, under U. S. Government direction, was urged and endorsed by President Stevenson and Bur-

burgh Canal system; by J. W. H. Glass the Reading-Roxbury Manufacturer by Councilman Barkley, of Phoenixville by City Councilman John B. Dengler, by J. H. Zerby, Jr., of Pottsville, and others

Chairman Dempsey, of the Rivers and Harbors Committee, stated that the committee would view Schuylkill's claim with favor, and that the probability of survey authorization was excellent.

Should or should not Congress decide to include the Schuylkill Canal among the waterways that are to be immediately improved, or should Congress decline to take up the Schuylkill Canal question at this time, is not going to end the matter, for the co-operation of the State of Pennsylvania is to be sought and urged to the limit.

J. H. Z. Jr.

*There From Many States.
WASHINGTON, D. C., April 27, 1920.*

HISTORICAL ASSOCIATION
Port Clinton, Pa., 19549
Property of

SCHUYLKILL CANAL PLAN IS INDORSED

North American — 1/19/20

Gov. Sproul, Senator Knox
and 7 Congressmen

Back Project

CALL CONVENTION

READING, Pa., Jan. 18.—J. W. H. Glass, this city, vice president of the Schuylkill Canal Improvement Association, made up of various towns and cities along the water way, has received letters indorsing the project from Governor Sproul, Senator Knox and from seven congressmen.

The association will hold a convention in this city on Wednesday, January 21, to consider ways and means of interesting the federal government in converting the old canal, now virtually abandoned, into an anthracite coal carrier from Pottsville to Philadelphia nearly ninety miles, and to restore it to usefulness for general bulk freight traffic. J. H. Zerby, of Pottsville, is president of the association, which organized at Washington, D. C., last month, with Mayor John K. Stauffer, of Reading, as one of its boosters.

James H. Craig, deputy secretary of internal affairs, and George M. Lehman, a state engineer acquainted with waterway systems, will attend the convention. The seven congressmen sending letters promising aid of a federal bill to restore the canal, or otherwise supporting the move, are Arthur G. Dawalt, Henry W. Watson, Thomas F. Butler, George P. Darrow, M. M. Garland, G. W. Edmonds and Guy E. Campbell, who has a canal bill now before congress.

TRENTON WAITS BIG DAM CONSTRUCTION

Gould's Rift Could Light Delaware Valley From Water Gap to Capes

Inquirer
Secret Surveys Made; Conjecture Made P. R. R. May Be Behind Great Project

Special to The Inquirer.

TRENTON, N. J., Dec. 20.—Lighting the Delaware Valley from the highlands of the Water Gap to the capes and supplying the electric power to run hundreds of industrial plants located in the adjacent areas, are the possibilities, it is said, latent in the plan to construct at Gould's Rift in the river above Trenton what, when completed, will prove one of the most powerful hydro-electric plants in the country. To accomplish this means nothing less than the harnessing of the Delaware River by construction of a power dam insuring a water head of at least fifteen feet. While in inner circles here it is understood that a plan of this kind is on foot, that the project is "in the air," as Mayor Frederick W. Donnelly expresses it, no specific information as to the big interests back of it has been made public.

In some circles it has been thought the promotion was in the hands of either Stone and Webster, of Boston, who put through the power dam on the Mississippi, or a similar organization. Others believe that the development is probably being undertaken by interests which will be benefited through the operation of such dam. Among them it is thought may be included the Pennsylvania Railroad, which it is known has planned to electrify its service between Philadelphia and New York and which would in this way obtain at a minimum cost the electric power required to carry out this plan.

"I admit that it is only a guess," said M. D. Warren, traffic manager of the Chamber of Commerce, "but I can conceive of the Pennsylvania Railroad being interested in such a development. It is understood that the line is to be electrified between here and New York. The Delaware River at Trenton would be the logical point to establish a great power plant for such purpose. As is generally admitted the possibility to construct a hydro-electric plant above here by damming the river offers a solution when it comes to seeking a cheap electric power service, so why not include the railroad among those who may be interesting themselves in the development so long as we cannot say definitely what interests are really back of the project?

"What has caused me to wonder as much as anything else is that such a development was not realized long ago."

Mysterious Doing Carried On

Interest has suddenly been revived in the work carried out by a corps of engineers who spent several weeks in Trenton and vicinity during the summer without disclosing definite information as to what they were doing. It is now believed that they were engaged on a "gumshoe" investigation in connection with the proposed power dam. It is also known that a quick survey was made recently of the river just above here. At the time it was believed it had something to do with the plans which have been more or less in contemplation in connection with the opening up of the upper Delaware River to navigation. This is now considered as having a significant bearing on the power dam project.

One thing is generally conceded, the site for such a dam exists in the vicinity of Gould's Rift and the unusual and unexplained interest taken in the river in that vicinity seems inexplicable, except as indicating that an improvement of the character described is contemplated by an organization strong enough to put it through.

What lends color to this solution is the possibility of constructing a fifteen-foot power dam at this point which would limit the district affected by the back-flow of water to a little over three miles above the city, approximately as far as Washington's Crossing. Consequently there would be little levying work required and a comparatively small

property damage. These are two of the big factors, it is said, that have to be considered in planning all hydroelectric plants. Incidentally, Gould's Rift is just above the tidal limit.

"There is no discounting the fact that more than 20,000-horse power is going to waste in the river here," said Mayor Donnelly today. "There have been a number of plans at different times to construct a water power at Trenton. A small step in that direction has already been undertaken. Nothing, however, so far as I know, has approached in magnitude the plans for the proposed development. The value of such a power plant in connection with the deepening of the channel in the Delaware to Trenton should not be lost sight of. It would also prove a long first step toward opening up navigation in the upper river. It has many bearings, all of which would seem to benefit that region as much as any other."

Mayor Donnelly stated that he had not been consulted by any one connected with the project, but that it had been heard of. As he expressed it, "It is in the air."

That construction of such a dam would prove an opening wedge to navigation in the upper Delaware, possibly as far as Easton, Pa., was the opinion of Abram Swan, Jr., city engineer.

"Allowing for the possibility of connecting up certain levels above the proposed dam site, it would be possible, I should say, through the construction of possibly eighteen small dams and locks in the upper river to open it up to navigation all the way to Easton," he said. "It would seem that a partial answer has been found to the cost of developing that section of the river which has heretofore been considered prohibitive in comparison with the value of the traffic it would handle."

Efforts to secure an approximate idea of the cost of an hydro-electric plant at Gould's Rift proved futile here today. While it was conceded by those in a position to make such an estimate that it would involve the expenditure of hundreds of thousands of dollars, it was contended that after the plant was once in operation it would quickly earn back the cost of construction, while thereafter only overhead expense would have to be considered and this, it was said, would be comparatively low as compared with steam plants of the same magnitude.

One interesting possibility was suggested in the dam's connection with the Delaware-Raritan Canal. It was said that power could be supplied which would result in the canal being electrified, thus making it possible to bring vessels through at a considerably greater speed than if permitted to travel under their own power. It was explained that this could be effected by the use of electric shoes attached to the vessels which could be made to follow a rail as do trolley cars on third rail systems.

In connection with the deepening of the Delaware River channel to this point, it is now being urged that a channel of not less than twenty-five feet is necessary. It is proposed to construct a basin approximately 300 feet wide and 1000 feet long with a depth of more than 25 feet in connection with such a channel. The purpose of the basin will be to insure floatage for vessels reaching Trenton with the tide and laying over to discharge or load cargoes. The plan is the same in principle as that carried out at London in connection with the navigation of the Thames River.

"What has caused me to wonder as much as anything else is that such a development was not realized long ago."

BOATING RESUMED MONDAY

Canal Will Not Be Abandoned as Had Been Rumored

Fears entertained and rumors that had gained circulation to the effect that the Schuylkill canal would be abandoned as a waterway were dispelled when it was announced by the Schuylkill Navigation Co. that navigation on the canal for the season was begun on Monday, July 10.

Such reports, which were rapidly gaining circulation and arousing much concern in the regions through which the canal passes, are supposed to have had their origin in the fact that not a boat had moved thus far this season. The cause of the lateness of the opening of navigation was explained by W. B. Nissley, superintendent, as due to the making of necessary repairs and improvements to the canal and the erection of a new shipping wharf above Hamburg. This is now practically completed and shipping of coal will be pushed the remainder of the season.

STATE WILL BUILD BRIDGES ON HIGHWAY

Pa. Record 7/5/10
Highway Department to Do the Work Where No Bids Are Received.

Harrisburg, July 4.—"Due to the exceedingly motor truck and other vehicular traffic, the bridge problem assumes big proportions," declares Highway Commissioner O'Neil in a statement issued here tonight in which he calls attention to the fact that all bridges originally built by townships and on State main highways now must be cared for by the State. Some of them are old structures. "As rapidly as possible the department is replacing these old bridges with modern ones," says the statement. "The department forces will build needed bridges for which no bids were received or rejected as too high."

INDICTS COAL COMPANY FOR POLLUTION OF STREAM

Special Dispatch to The North American
POTTSVILLE, Pa., Nov. 15.—The Schuylkill county grand jury has indicted the Lehigh Coal and Navigation Company under a new law for maliciously discharging culm into public streams, and attorneys for the company today began to fight the prosecution on technical grounds, a motion being made to quash the indictment.

Jacob Zehner, a farmer from West Penn township, is the prosecutor. He says his grist mill and other properties have been greatly damaged by culm. Ten years ago Zehner got a verdict for heavy damages from the Lehigh Coal and Navigation Company, but as this has not stopped the practice, he says he will try to put the officials responsible in jail.

Property of HISTORICAL ASSOCIATION

Port Clinton, Pa. 18519

Rdg. News Times 7/2/20. SCHUYLKILL CANAL

The Schuylkill Canal Improvement Association, which holds a meeting in Reading today, proposes to resurrect that one-time famous inland waterway and restore it to something of its former usefulness. It is a big undertaking and beset by many difficulties, but headed by that energetic editor from Schuylkill county, J. H. Zerby, the organization may succeed in accomplishing something. Another man, J. W. H. Glass, of this city, has entered the project whole-heartedly, and has succeeded in enlisting the services of others who at first were inclined to look upon it as a hopeless undertaking. Last November Mr. Glass was a candidate for city council, and although comparative a new man here, he polled a fine vote and impressed many as being public-spirited and progressive. His efforts in behalf of restoring the Schuylkill canal have been marked by intelligence and persistency.

And this project, by the way, is one that ought to enlist the sympathetic co-operation of all persons having either a direct or indirect interest in the city's industrial and commercial welfare. The Chamber of Commerce especially, whose primary object is the advancement of Reading should lend its valuable assistance and aid in bringing about Federal recognition of the importance of the work. The canal has already, through the efforts of the body which meets here today, been included in the list of waterways which the inland commission will recommend to Congress as one worthy of Federal aid.

A determined effort backed by the various towns from Pottsville to Philadelphia will show to Congress that we are in earnest, and it will go far toward inducing favorable action.

The Schuylkill canal was in its time the main artery of transportation between the coal regions and Philadelphia and it continued an important factor in keeping down freight rates until in an evil day it fell into the hands of the railroad company. Since then it has been permitted to deteriorate, and as a factor in transporting coal and freight it is today a negligible quantity. The war, however, demonstrated the utility and importance of inland waterways, and the

national lawmakers awoke to the necessity of restoring and enlarging some of the more important ones.

With the restoration of the Schuylkill canal will come increased facilities for moving coal and freight and incidentally a reduction in rates, a feature which must appeal to every one doing business in the cities of the Schuylkill Valley. The chief difficulty may be to secure the canal's divorce from the railroad company, which has a 999-year lease. But that is an obstacle not insurmountable where its removal is demanded by public opinion and a willing Congress.

THE SCHUYLKILL CANAL MEETING

Rdg. Telegram 7/21/20
Association Which Seeks Its Restoration Discusses Project at Berkshire Meeting

A one-day conference of the Schuylkill Canal Improvement Association opened this morning at 10:30 o'clock at the Hotel Berkshire. Rev. William B. Smith offered the invocation.

Mayor Stauffer welcomed the delegates to the city, and endorsed the project. The mayor said: "It is significant of the interest felt by all towns along the Schuylkill Valley as well as by the state government that there should be such prominent men from each community represented in attendance at the convention."

The morning session was devoted to routine business. J. H. Zerby president, addressed the delegates who represented cities in the Schuylkill Valley from Norristown to Pottsville.

At the session a resolution was introduced by President Zerby, calling upon Congress to make an official survey of the Schuylkill canal and endorsing the provision of the Campbell bill, calling for a state appropriation for various canal developments in the state.

A delegation was also chosen to be present at a convention of the association to be held in Washington, February 21.

At 6 o'clock tonight a banquet will be held at the Berkshire. Mayor Stauffer will be the toastmaster.

DECHANT'S PLAN TO UTILIZE CULM EXCITES COAL MEN

Rdg Times 4/4/27
National Body Asks Further Information on Matter from Chamber of Commerce

SEEKS RIVER CLEANSING

Silt, if Continued Disposal Is Allowed, Will Soon Destroy Schuylkill

Intrigued by the possibility of turning waste matter into money, the National Coal Men's association has requested the Reading Chamber of Commerce to explain more fully the plan outlined by Fred H. Dechant, local engineer, at the recent conference held here between the river pollution committee of the Chamber of Commerce and government engineers.

Dechant's plan showed how the culm now being emptied into the Schuylkill river could be burned, turned into power and made a source of revenue to the coal operators. The river pollution committee will refer the matter to the engineer in an effort to enlist further co-operation in its work to clean the rivers. For more than four years the committee has been studying the problem of river pollution with the view of having the river cleansed.

\$5,259,915 IN WORK TO IMPROVE WATER

That Sum Expended or Under Contract Since Moore Assumed Office

Plans Call for Every Measure of Safety and Economy

Inquirer 12-11-21

A report showing that \$5,259,915 worth of work has been contracted for to improve the city's water supply since he assumed office was made by Mayor Moore yesterday when he signed contracts for \$449,900 worth of new construction work.

The plumbing and filtering capacity of the water works have been greatly increased, new service mains to raise the water pressure and improve the supply have been laid and general improvements have been and are being worked out which will result in substantial economies in the cost of operation.

Council has provided \$6,605,000 in loan funds for the improvement of the water supply since the Mayor assumed office and approximately \$1,350,000 of this amount is left unencumbered for the completion of the projects now under way under the direction of Carleton E. Davis, Chief of the Water Bureau.

Extensions Cost \$150,000,000

A special commission of eminent engineers went over the city's water system more than a year ago and recommended extensions which eventually will cost from \$100,000,000 to \$150,000,000, and which include an intake far up the Delaware River and dams to impound the waters of the Neshaminy and Perkiomen Creeks.

The plan submitted by Chief Davis and approved by the administration dovetails in with this scheme, but contemplates first the improvement of the existing plant until it is 100 per cent efficient.

Provision is being made first for safeguarding, strengthening and where necessary extending the existing works with the view of relieving as soon as practicable the acute water shortage which prevails in many districts. Action also is being taken to minimize the danger from accidents arising from the worn out and run down condition of much of the equipment.

In following out these first aid measures every effort has been made to tie the work in with the plans for the future so it would not be necessary to throw away any important sections of the plant or equipment.

In the plans of immediate rehabilitation all parts of the system have received attention and all portions of the city have been cared for.

Damroy Crop Lands
Investigation has shown that soil dirt causes most of the trouble as this deposit silt on the bottom of the river, causing it to fill up, destroying the navigable nature of the stream and ruining and destroying farm land. However, after a flood, this silt deposit is forced over the banks of the river. Once the farm land is covered with these deposits it is useless as a crop producer. Evidence of this is said to exist along the entire river front.

The local committee in its effort to stop the pollution had several interviews with former Governor Pinchot and has consulted a number of engineers.

H. W. Elvidge, secretary of the Chamber of Commerce, said last night, "If either the United States government or the state government would determine to study carefully and analyze the causes of the pollution of the Schuylkill river, I believe that they quickly would find some way by which the by-products now going from coal mines into the river could be utilized in an industrial way. There was a time when fine coal was not in demand, but at this period the use of powdered coal has developed to a stage where public utilities are using it and it is quite possible that a valuable by-product of mining is going to waste and finding its way down through the Schuylkill river with all the results and damage."

Will Destroy Whole River

Members of the committee predict that at the present rate of pollution it will be a matter of only 10 or 12 years before the river will have been destroyed to the city limits of Philadelphia. At the present time it is unfit for navigation down as far as Pottstown.

In addition to conferences with government engineers and the Governor, the committee also met in the parlor with Mayor Moore of Philadelphia and John C. Sproule, director of wharves, docks and ferries of Philadelphia. Both these officials agreed that "the stream should be kept open and unobstructed."

Service of the Mains

About \$82,000 has been expended or put under contract for service mains and about \$500,000 expended for supply mains. In distinction from service mains, these supply mains are pipes 30, 36 or 48 inches in diameter acting as feeder mains in large territories. A 48-inch main has been laid in West Philadelphia southerly from Cedar avenue along the line of Fifty-seventh street to Woodland avenue. The water pressure in this territory has been increased from 20 pounds or less to 40, 50 or even 60 pounds. This increase is a boom to manufacturing establishments, to residents and adds greatly to fire protection facilities.

A 20-inch main is now being laid on Sansom street from Ninth to Twenty-first streets, for the purpose of stabilizing the water pressure in the territory from Chestnut street to Walnut.

The Queen Lane improvement project is the largest undertaking in the general improvement of the water works, carrying with it expenditures and liabilities to date of \$1,850,000. This will add 50,000,000 gallons a day to the output of the plant and the majority of this volume of water will be available in the central and southern business sections where the shortage has been most acute. Already some of this additional water is being supplied.

At Torresdale, where 60 per cent. of the city's supply is taken from the Delaware River, about \$450,000 has been placed under contract, all with a view of strengthening, safeguarding and protecting the existing appliances. Two years ago this plant was on the verge of complete breakdown and serious accidents followed one another in rapid succession.

At Lardner's Point pumping station, where filtered water from Torresdale is received and relayed under pressure to important parts of the city, about \$250,000 has been placed under contract, with the same object as that pursued at Torresdale.

Contracts for \$300,000

At Shawmont and Roxborough, furnishing the supply for Roxborough, Manayunk, Germantown and Chestnut Hill, expenditures and contracts approximating \$300,000, have been made to add to the pumping capacity and result, in the near future, in an increased pressure and volume in the southeastern portion of Germantown or easterly from Chelten avenue. Still further appropriations must be made for the Shawmont and Roxborough works as the demand for water will soon outstrip the capacity of the plants.

Economy of operation has been given careful attention. It is proposed to operate George's Hill Pumping Station and Belmont filters, in West Philadelphia, by electric current developed at Belmont Pumping Station along the West River drive, and to consolidate the two plants at the Belmont filters. Conservative figures show that this consolidation will result in a net saving of approximately \$30,000 a year after allowing for carrying charges.

ORGANIZE TO REVIVE CANAL TO TIDEWATER

Rdg Eagle 12/8/19

READING AND POTTSVILLE MEN AT WASHINGTON BOOST PROJECT

Washington, Dec. 8 (Special) — At a meeting here today of delegates from communities along the Schuylkill River attending the inland waterways convention, a permanent organization, to be known as the Schuylkill Canal Improvement Association, was formed and a resolution adopted and presented to the rivers and harbors committee of the House of Representatives, urging the opening of the Schuylkill canal from Pottsville to tidewater for the hauling of freight, particularly of coal.

Officers of the new association elected were J. H. Zerbey, Pottsville, president; J. W. H. Glass, Reading, first vice president; E. A. Barkley, Phoenixville, second vice president; and W. L. Binder, Pottstown, secretary-treasurer.

Major-elect Stauffer, of Reading, attended the meeting. It was decided that when the delegates return to Pennsylvania, organization of the associations shall be continued in all the communities interested. The resolution presented to the House committee reads as follows:

"To the committee on rivers and harbors, House Office Building, Washington, gentlemen:

"Whereas, Recognizing the importance of opening up the Schuylkill canal from Pottsville to tidewater for the hauling of freight and particularly coal, affording a direct route of transportation from the mines to the barges of our outgoing vessels, thereby eliminating the re-handling necessitated by transportation railroads and

Saving \$40,000 a Year
By the removal of the Wentz Farm standpipe station to Lardner's Point, a net saving of \$40,000 a year is estimated.

The repair shop, now being erected and equipped at Twenty-ninth and Cambria streets, will result in economies and will at the same time place at the disposal of the Water Bureau a better equipped up-to-date modern plant.

The balance of appropriations still on hand is adequate to complete the projects now under way. There is not sufficient money, however, to finance such important improvements as the new Fairmount Dam, a general water supply in the northeastern section of the city above Frankford, or the extension at Shawmont and Roxborough plants. Included in this latter project must be sufficient money to replace the so-called Hartwell avenue line, leading from the Roxborough standpipe to Chestnut Hill. On Wednesday last this pipe broke for the ninety-third time since its installation with interruption of water supply of Chestnut Hill.

Property of
HISTORICAL ASSOCIATION
Port Clinton, Pa., 19549

BLASTING OF ROCKS MAY STOP FLOODS

Phila Evening P. & P.

Engineers Would Open Options at Schuylkill Channel to Save Damage in Manayunk

Halting of Rising Water Would Prevent Enforced Closing of Mills

Plans for blasting away the rocks in the Schuylkill River at and above "the Falls" are being prepared for submission to the Fairmount Park Commission as a means of stopping floods that cause thousands of dollars' worth of property damage yearly and enforce idleness of many employees in Manayunk mills. High water frequently forces a score or more of mills to shut down.

Studies made by engineers for the Park Commission reveal that the great rocks over which the waters of the Schuylkill cascaded a century ago and which were known as the "Falls of Schuylkill," form a gorge which holds back the flow of water during freshets and causes it to back up and flood the basements and first floors of the mills at Manayunk.

It is believed that the clearing of the rocks and a great amount of dredging work will virtually eliminate the flood menace.

The problem of clearing the river of obstructions and making it not only a pleasure point, but a place of real value to the city has been worked out as a result of action taken by Mayor Moore some time ago to obtain data on the cost of a municipal dredging plant for the Schuylkill.

It is understood his proposal is looked upon favorably. A new plant would cost between \$80,000 and \$100,000, it is said.

A great quantity of mud has been cleared from in front of Boat House Row by a private dredge at city expense, and Park officials estimate that 50,000 cubic yards were taken out of the river with the \$25,000 appropriation made a year ago. Along with the recommendations to be made for a city dredging plant is expected the proposal that plans be adopted to make the river eight feet deep from Fairmount Dam to above the mouth of the Wissahickon Creek.

This would mean the dredging of two side channels, where the flow of water would provide a "scour" and eat away the mud in the centre of the stream; the blasting away of great masses of rocks between the Falls bridge and the mouth of the Wissahickon and the automatic formation of a storage basin as part of the future water supply plans being worked out by the administration. Water would be retained in this basin as a reserve supply for the Belmont filters.

SATISFY 100-YEAR OLD MORTGAGES

Money Loaned by Stephen Girard to Schuylkill Navigation Company

Century-old debts — recorded by Father Berks in his first court house on Penn street, preserved later in the North Sixth street building and now in the temporary quarters — were wiped out yesterday when seven mortgages against the old Schuylkill Navigation company were paid. The mortgages were for loans aggregating \$2,419,764.12.

To the heirs of Stephen Girard, founder of Girard college in Philadelphia, was paid \$230,850 to erase the oldest debt, contracted on December 15, 1823. Girard, according to the records in the office of Recorder of Deeds Harry O. Thornburg, loaned the money to the company "to complete works contemplated." The rate of interest was not specified by the recorder of 1823, John Miller.

Latest Loan in 1870
The other mortgages, dated 1842 and 1870, were for loans which ranged from \$141,000 to \$1,200,000. The papers, in which it was said the heirs of the original lenders were paid through Philadelphia and New York banks, were filed in Thornburg's office by Albert W. Tuttle, representing the Reading company.

The Girard mortgage is one of the oldest satisfied in the county since Thornburg took office, the recorder said.

How 2 Men Won Coal Rates Fight

North American

3-19-17.

COMPROMISE of the coal freight rate controversy in this state, which resulted in material reductions in freight-carrying charges from the mines to this city, was the first real rate fight won in this country that resulted in making the railroads give up actual revenue.

A saving of \$2,000,000 each year to Philadelphia consumers of anthracite will result directly from the compromise, which was forced upon the carriers by Dr. Ward W. Pierson and Harold S. Shertz, rate experts of this city, representing independent consumers.

For twelve years the national government, thru high-salaried attorneys, in various states fought the railroads in numerous instances in efforts to make them disgorge in rate cases. Twice the United States supreme court was brought into controversies, but all without loss in revenue to the carriers.

Pierson and Shertz originally succeeded in getting the Pennsylvania public service commission to order a \$4,000,000 cut in rates, but for two years the carriers delayed, thru legal technicalities, any enforcement of the order. Then, cornered by Pierson and Shertz, they agreed to a "fifty-fifty" compromise, cutting the rates \$2,000,000 annually. And the commission's order prohibits any compensating increases by the railroads for three years.

Five coal-carrying railroads are affected by the compromise, which ended a four-year legal battle directed independently by the Philadelphia experts, whose clients were the coal consumers of this city. The reductions forced upon the carriers amounted to 25 cents a ton on prepared sizes, 15 cents a ton on pea and 5 cents a ton on steam sizes.



DR. WARD W. PIERSON



H. S. SHERTZ

They could also have continued their attack on the constitutionality of the act creating the public service commission, and they might have taken the case to the United States supreme court.

Gave Railroads Loophole

Whether or not it would be necessary to start all over again with a complaint before the public service commission, in event the fight was carried to the point where the commission's order ostensibly expired, is a fine legal point that has never been threshed out. But the loophole that it offered the railroads to drag the case along interminably convinced all parties anxious to see a reduction in the exorbitant rates that it would be the best policy to compromise.

Accordingly, frequent conferences were held. The railroads put forth a proposition which, it is understood, was immediately rejected by Pierson and Shertz, and negotiations were on the point of being called off when the complainants' attorneys were asked to submit a counter-proposition. How many exchanges were made could not be learned yesterday.

The railroads and the prosecuting attorneys finally came to a deadlock. Attorney General Brown then was called in and made suggestions which were accepted by both sides. He then suggested the conference of all parties concerned to be held next Saturday morning.

Persons at Harrisburg in close touch with the situation said yesterday that the reduction of the freight rate on pea coal has not been definitely decided upon, but it is understood that it will be about 10 cents a ton. There may also be a reduction of 5 cents a ton on steam sizes.

Present average rates on the three classes of anthracite from the big Pennsylvania fields of Wyoming, Schuylkill and Lehigh to Philadelphia for local delivery are \$1.70 a ton on prepared, which includes chestnut and al larger sizes; \$1.40 on pea col and \$1.25 on steam sizes.

Ship 5,000,000 Tons Yearly

Approximately 5,000,000 tons of all classifications are shipped annually to this city for local consumption by the five railroads named. Altho only the Pennsylvania and Reading have terminals in this city, coal for Philadelphia is transported to these roads by the others from sections of the coal fields tapped by the lines of the Pennsylvania and Reading.

Of this tonnage about 60 per cent is in prepared sizes, approximately 12½ per cent in pea coal and the rest in steam sizes, buckwheat, rice, barley, etc. Thus the big saving of 25 cents a ton is placed on the sizes most commonly used, where it will be of benefit to the largest number of consumers.

Figures showing the total loss of revenue that would result from enforcement of the order of the public service commission were submitted by the five railroads in their appeals from the decision. They are as follows:

Philadelphia and Reading, \$2,000,000 annually.

Pennsylvania, \$1,500,000 annually.

Central Railroad of New Jersey, \$100,000 annually.

Delaware, Lackawanna and Western Railroad Company, \$100,000 annually.

Lehigh Valley Railroad Company, \$100,000 annually.

Joint and individual appeals were filed by the railroads in January of 1915, following the issuance of the commission's order. In these it was set forth that "it appears, from the certified record, that a compliance with the order will necessarily force appellants to reduce a large number of intrastate rates within the state of Pennsylvania, in addition to the rate on anthracite coal to Philadelphia for local delivery."

It was also contended in the joint appeal "that the effect of the reduction in rates resulting from the enforcement of said order of said commission will be to decrease the net revenues of appellants by approximately \$4,000,000 per annum."

Whether or not the conferees on compromise discussed in any way the possibility that the agreement will force reductions in rates to intermediate points could not be learned. It is known, however, that officials and taxpayers of towns in the state that might use the new rates to this city as basis for attacks on their rates are waiting with a great deal of interest for the final consummation of the case here.

No case against the railroads in recent years has been subject to so much delay as the Philadelphia hard coal freight rate fight. It had its inception late in 1912 when Harry E. Bellis, a rate expert, went to Pierson and Shertz and demonstrated that the rates to this city are unfair, discriminatory and excessive, a contention later borne out in the order of the public service commission, written by the late Samuel W. Pennypacker.

The matter dragged along until the summer of 1913, by which time the case had been pretty well prepared. Bellis and his attorneys went thru tons of railroad tariffs on all classes or commodities. They laid the results before several business men's organizations, which decided to file complaints before the old state railroad commission.

While these petitions were being drawn the case was brought to the attention of Mayor Blankenburg, who referred it to Director Morris L. Cooke, of the department of public works. Cooke was quoted as saying that it was "all rot." Attention of city councils then was called to the case and a resolution was passed instructing City Solicitor Michael J. Ryan, now a member of the commission, to file an intervening petition for the city.

Ryan appointed Shertz a special assistant city solicitor. Since that time the city has done nothing to back up the efforts of the traffic attorneys to get a decision. The petitions were filed late in 1913 and hearings were started by the railroad commission in the following year.

Bellis Showed Figures

At first the railroads paid little attention to the fight. But when Bellis produced figures showing that rates to this city were far higher than for longer hauls elsewhere the railroads got busy. The best railroad lawyers in the past were assigned to the case, and the baffle began in earnest.

The fight continued for a full year. Its high light came when the railroads insisted that they had no figures to show the actual cost of transporting anthracite. The commission ruled that unless Pierson and Shertz could give some evidence that such costs could be found, it would not order an examination of the

TO SAVE CANALS FOR THE FUTURE STATE ASKED TO TAKE UP SCHUYLKILL PROBLEM

Reading Eagle

Harrisburg, April 22.—Conservation of the state's water supply and the future development of its rivers and canals as commerce carriers were proposed to the commission on constitutional amendment and revision by representatives of the Pennsylvania State Grange as subjects of prime importance which should be written into the new constitution.

George W. Woodruff, counsel for the grange's legislative committee, laid particular stress on the importance of incorporating in the constitution provisions for canal development and the conservation of the water supply. He called the commission's attention to the failure to mention water specifically anywhere in the new draft.

He urged the adoption of a section patterned after the bill now pending in Congress providing for conservation of federal water power. His suggestion would require a license for the use of water power and would restrict the license to a period of 50 years.

Development of the Monongahela waterway in western Pennsylvania was cited by the speaker as an example of the revival of the waterway as a commerce carrier. He argued that the canal business, instead of decreasing the business of competing railroad, increased it.

SCHUYLKILL AN EXCEPTION.
Mr. Woodruff commented on the fact that with the exception of the Lehigh and the Schuylkill canals, these waterways had been taken over by the railroad in the early days of competition and virtually abandoned.

Attorney General Schaffer suggested it would be "a bold man who would put money into a canal development unless he was certain that the heavy truck had reached its zenith as a freight carrier."

"I heard Maj. Gen. Atterbury say in France," interrupted Vance C. McCormick, "that the time would come when the United States would depend on the canals as well as the railways as freight carriers. Gen. Atterbury said his experience in France with the French canals and railways proved the operation of the two was feasible."

Edward J. Fox, former Supreme Court justice, quoted a former president of the Lehigh Canal Co. to show that canal development could be looked for in the future. The former canal officer, Justice Fox said, remarked at the time when the canals were being abandoned that they would be rehabilitated some day and converted into great commerce carriers.

TO SPEAK FOR CANAL BILL

J. W. H. Glass, of this city, a candidate for the Republican nomination to the Assembly and vice president of the Schuylkill Canal Association, will go to Washington next week to attend a meeting of the rivers and harbors committee of Congress. The committee will hold a session at 10 a. m. on Tuesday, April 27, at which Mr. Glass will present arguments in favor of the Campbell House bill, providing for the survey of the Schuylkill and other canals. If the Campbell bill passes Congress, engineers will survey the canal with a view to having the federal government take it over and develop it for inland traffic on

AIR CANAL PLAN AT WASHINGTON

Fox, for Norristown, and Others Address Rivers and Harbors Body

Norristown Times 4/27/20

VICINITY REPRESENTED

The restoration of the Schuylkill Canal to function as a modern commerce carrier, as was the original intention, was given a decided boost yesterday at a meeting of the Rivers and Harbors Committee of Congress held in the room of the Ways and Means Committee at Washington.

Gilbert R. Fox, Esq., represented the borough of Norristown, and with others interested, explained the necessities of the furtherance of the improvement to the inland waterways.

A large attendance of members from all over the country interested in the improvement of the transportation facilities favored the Campbell bill.

The Watson bill, which carries with it an appropriation to cover the cost of making surveys of all the inland waterways, where there is a possibility of utilizing them for transportation, was first considered and the members of the committee were much interested in the matter inasmuch as the present railroad facilities are at present inadequate.

Mr. Fox heartily supported the Watson bill, as it contains an appropriation for a survey, under the direction of the United States Government, of the Schuylkill Canal, at one time a very busy carrier of commerce.

The sentiment of the committee was favorable to improving the waterways and making them an important part of the transportation system of the country, operating one in conjunction with the other in a vast system and not as has been done in the past as a separate and distinct unit of transportation.

The lack of money for this purpose at this time is the only drawback in the consummation of the project.

There were present representatives from Pittsburgh, Phoenixville, Reading, Norristown and other places, all of which favored the passage of the Watson bill.

INDUSTRIES AND PLANTS ESSENTIAL TO THE WAR

DATE.

Chairman Baruch, of War Industries Board, Issues New Priorities List.

TO SERVE AS MASTER KEY

Divided Into Four Classes, According to Their Relative Importance.

Washington, D. C., Sept. 8.—A new priorities list of industries and plants essential to the war or the civil population was announced today by Chairman Baruch, of the War Industries Board. It was described as "the master key" governing the issuance of priority certificates by the priorities commissioner of the board for fuel supply or electrical energy, transportation, material facilities, capital and labor and as the basis for industrial exemption from the draft.

"The inclusion of the industries and plants on this preference list," said the announcement, "does not operate as an embargo against all others, but the effect is to defer the requirements of all other industries and plants until the requirements of those on the preference list shall have been satisfied."

"Industries have been grouped into four classes according to their relative importance. No distinction, however, has been made between any of the industries or plants within any one class, and it was explained that no significance is to be attached to the order in which they are listed within any class. The industries or plants under Class 1 are of exceptional importance, and include those most vital to the prosecution of the war and the public, and their requirements must be fully met in preference to those of the three remaining classes."

Classification of Experts

Rule XXIV. In Class 2 shall be placed:

(d) Any registrant found to be engaged in a "necessary" industry or occupation, or employment and found to be "necessary" therein in the capacity of a laborer worker or employee especially fitted for the work in which he is engaged.

Rule XXV. In Class 3 shall be placed:

Any registrant found to be engaged in a "necessary" industry, or occupation, or employment and found to be "necessary" therein in the capacity of—

(k) As highly specialized expert.

(l) An assistant or associate manager of the industry or in the occupation, or employment, or a manager of a substantial integral part thereof.

Rule XXVI. In Class 4 shall be placed:

(d) Any registrant found to be engaged in a "necessary" industry, or occupation, or employment and found to be "necessary" therein in the capacity of sole managing, controlling and directing head thereof.

War Workers Classified

General Crowder does not provide a blanket exemption for men in the service of the Young Men's Christian Association, the Knights of Columbus, the American Red Cross or the Jewish Welfare League, which are the uniformed auxiliaries of the military establishment. He provides that all such men shall have to present claims for deferred classification in exactly the same manner as the claimants for industrial exemption, and that they shall be classified according to the various grades of their importance.

His ruling in this respect is included in the revised regulations as a special classification follows:

Note 1. Persons claiming to be necessary to organizations that are claimed to be necessary to the maintenance of the military establishment or effective operation of the military forces or the maintenance of national interest during the emergency, such as American Red Cross, Young Men's Christian Association, Knights of Columbus, Jewish Welfare League, may make claims as being engaged in occupations or employments under Sections 80 to 89, inclusive, and such claims must be supported by affidavits as provided in respect of industrial claims in the questionnaire.

General Rules

Rules XV, VI and XVII, quoting the general classification rules of the regulations follows:

Section 81. General classification rules applicable to industries, occupations or employments, including agriculture.

Rule XV. The words "persons engaged in industries, occupations or employment, including agriculture," as

Domestic Fuel in Class 1.

Fuel for domestic consumption—residences, apartment houses, restaurants and hotels—is in Class 1. In that class also are food, railways operated by the Railroad Administration, the army and navy, aircraft; ships and shipyards, war chemical plants, coal mines and by-product coke plants, certain public utilities, ordnance and small arms plants and ammunition and explosives.

Requirements of those grouped under Classes 2, 3 and 4 will be given priority over those not on the preference list, but as between these three classes there is no complete or absolute preference provided. Relative importance of the industries and plants within each group will be the basis of operation.

Each plant listed in the three last classes will be required to file with the War Industries Board before the fifteenth of each month a report of its activities during the preceding month. Failure to comply with this order will mean removal from the preference list. The complete list follows:

Class 1.

Plants principally engaged in producing aircraft, supplies and equipment, ammunition for the United States and the Allies; ordnance and small arms for the United States and the Allies; chemicals for explosives, ammunition and aircraft and use in chemical warfare; metallurgical coke and by-products, including toluol; explosives for military purposes; feed for live stock and poultry; food, including cereals and cereal products; meats, including poultry and fish; vegetables, fruit, sugar, syrups, glucose, butter, eggs, cheese, milk and cream, lard, lard compounds, oleomargarine and other substitutes for butter or lard, vegetable oil, beans, salt, coffee, baking powder, soda and yeast, and ammonia for refrigeration; fungicides, oil and natural gas for fuel or mechanical purposes (including pipe lines and pumping stations); toluol (gas plants); ships, other than pleasure craft or vessels not built for the United States or the Allies or under license of the Shipping Board; plants; plants producing solely steel ingots and castings by the various processes; domestic consumers of fuel and electric energy for residential consumption, including homes, apartment houses, residential flats, restaurants and hotels; coal mines, arsenals, cantonments and camps of the army and navy yards, railways operated by the United States Railroad Administration; maintenance and operation of ships, excluding pleasure craft, not common carriers, and maintenance of public buildings used as hospitals or sanitaria.

Class 2.

Plants principally engaged in producing locomotives or traveling cranes, rolling and drawing copper, brass and other copper alloys, coke not otherwise classified and listed, ferro alloys, machine tools and wire rope; blast furnaces producing pig iron; steel rail mills (producing rails over 50 pounds per yard); construction work of the War or Navy Departments in embarkation ports, harbors, fortifications, flood protection, operations, docks, locks, channels, inland waterways and in maintenance and repair of same; mines producing metals and ferro-alloy minerals; street railways, electric lighting and power companies; gas plants not otherwise classified; telephone and telegraph companies, water supply companies and like general utilities; railways not operated by the United States, excluding those operated as plant facilities.

Class 3.

Plants engaged principally in producing food not otherwise listed, not including soft drinks, confectionery and chewing-gum; ice, mining tools and equipment, equipment and supplies for producing or transporting oil or gas for mechanical purposes, iron and steel chains, electrical equipment, explosives not otherwise listed; tinplate and small or hand tools for working wood or metal; fuel and electric energy for domestic consumers not otherwise listed; steel rolling and drawing mills not otherwise listed; maintenance of public buildings other than those used as hospitals and sanitaria.

Class 4.

Laundries, plants engaged principally in producing manufacturing hemp, jute and cotton bags, manufacturing chemicals not otherwise listed, medicines and medical and surgical supplies, fertilizers, fire brick, gray iron and malleable iron castings, food containers, insecticides and fungicides, soap, tanned leather and tanning extracts, cotton and woolen textiles, including spinning, weaving and finishing, cotton and woolen knit goods, textile machinery, binder-twine and rope; plants engaged exclusively in manufacturing boots and shoes; plants engaged exclusively in manufacturing pulp and paper; cotton compressors; plants engaged principally in producing newspapers or periodicals which are entered at the postoffice as second-class matter; plants preserving, drying, curing, packing and storing tobacco, but not for manufacturing and marketing.

vent the district board from holding as necessary any industry, occupation or employment, including agriculture, not contained therein. Such preference lists and other facts and information in the possession of such advisers will supplement the information in the possession of the district boards and will also be used to assist the district boards in dealing with specific cases.

ENT.

PORI

Special Facilities for Board

"Inasmuch as the United States employment service under the Department of Labor already has established throughout the nation State advisory boards and numerous recruiting agencies in divisions of the country, and is therefore familiar with the needs for skilled labor in each community and the supply in each community, the advice of the industrial adviser nominated by the Department of Labor will be of great value to the district boards in arriving at their decisions as to whether or not individuals engaged in certain industries, occupations or employments are engaged in work necessary to the maintenance of the military establishment, the effective operation of the military forces or the maintenance of the national interest during the emergency.

"The Department of Agriculture has special facilities for being informed as to the supply of labor for agricultural purposes and the demand for such labor in the various communities of the nation; and such information will be through the adviser nominated by the Department of Agriculture available to the district boards and helpful in assisting such boards in determining the claims by or in respect of registrants based upon their engagements in agriculture.

"The necessity of not seriously interfering with certain occupations and employments, such as financial, commercial, educational, hospital work, care of the public health, or with the conduct of certain other activities necessary to the public welfare and the prosecution of the war, requires that the district boards have the co-operation of such advisers so that persons necessary in such activities be not removed therefrom. To this end the adviser nominated by the district board should bring to the attention of the district board the questions as to whether or not individuals engaged in some particular industry, occupation or employment are so necessary thereto as to outweigh the benefit to the nation should they be drafted into the army.

Access to Questionnaires

"Such advisers shall under rules to be prescribed by the local boards have access to the questionnaires and other records in the files of the local boards, and shall confer with persons engaged in various industries, occupations and employments for the purpose of having the cases of certain individual registrants, by whom or in whose behalf no claim for deferred classification has been made, presented to the district board for consideration and determination as to whether or not such registrants should be placed in a deferred class.

Extension of Time Provided

"If any such adviser files with the district board a claim on Form 1001-A for deferred classification on the ground of a registrant being engaged in a necessary industry, occupation or employment, including agriculture, the district board shall forward such claim to the local board having jurisdiction, and upon receipt thereof if will be the duty of such local board to certify the questionnaire and record of any such registrant to the district board for consideration, although no claim by or in respect of such registrant for deferred classification has been made or such registrant has waived deferred classification; Provided the day and hour fixed to report for military duty has not arrived.

"If the information and the affidavits necessary for the classification of the registrant because of his engagement in a necessary industry, occupation or employment, including agriculture, are not contained in the questionnaire of such registrant it shall be the duty of such local board to give the opportunity, by reasonable extension of time, to those interested in obtaining a deferred classification to furnish the information and supply the affidavits required by the questionnaire and the regulations. Pending the final classification of such registrant he shall not be inducted into military service.

Co-operation Urged

"It shall be the duty of such advisers to confer with the managers and heads of various industries and those familiar with the needs in occupations and employments, including agriculture, and instruct such persons as to their right under the regulations to file a claim for deferred classification in respect of any registrant who has failed or refused to file a claim for deferred classification in his own behalf or who has waived his claim for deferred classification.

"Such advisers should in all ways co-operate with the district boards in order that the information in their possession may at all times be available to the district boards and be made use of in the work of classifying registrants.

"If, under the authority of rule xxvii, section 101, a local board determines to consider a case for deferred classification because the registrant is engaged in a necessary industry, occupation or employment, including agriculture, notwithstanding no claim for deferred classification on that ground has been made, the local board shall, after endorsing the recommendation on the questionnaire, forward the questionnaire and record to the district board having jurisdiction. The district board shall thereupon consider the case and proceed to classify the registrant, notwithstanding the fact that no claim for deferred classification by or in respect of the registrant has been made."

Work Must Be Vital

Rule XVII. The word "necessary" as applied to any industry or occupation or employment or agricultural enterprise within the meaning of these regulations shall be taken to import that the discontinuance, the serious interruption or the materially reduced production thereof or the discontinuance or serious interruption thereof will result in substantial material loss and detriment to the adequate and effective maintenance of the military establishment or the effective operation of the military forces or the maintenance of national interest during the emergency.

A particular industry or occupation or employment or agricultural enterprise shall be found to be "necessary" only when it is shown that it is contributing substantially and materially to the maintenance of the military establishment or the effective operation of the military forces or the maintenance of national interest during the emergency.

"Such advisers shall have the right to furnish all pertinent information to the district board and may attend meetings of the board upon request of the board to which they are attached.

"Such advisers may place before the district board at its meetings, or at such other time as the board may request, all facts and information in their possession as to the preference lists issued by the priorities division of the war industries board.

"Such lists shall not be regarded as binding upon the district board in its conclusions as to whether or not any particular industry, occupation or employment, including agriculture, is a necessary industry, occupation or employment within the meaning of the law and regulations; nor shall such lists pre-

ECONOMY IN COAL USE SAID TO BE SOLUTION OF PRICE DIFFICULTY

Public Ledger

6/5/19

George Otis Smith Declares Conservation Essential
to Country's Industrial Prosperity—Supply
Running Out

WHOLESALE ASSOCIATION URGED TO PLEAD AGAINST RAILROAD OWNERSHIP OF MINES

George H. Cushing Advocates Return of Roads to Private Control
Only on Condition That Coal Lands and
Mines Be Abandoned

Cleveland, June 4.

An urgent plea for economical use of coal throughout the country was made today by George Otis Smith, director of the United States Geological Survey, before the American Wholesale Coal Association here. The association heard addresses also by George H. Cushing, on railroad ownership of coal lands, and by Gibbs L. Baker, on taxes.

"More than half of the world's estimated supply of coal," said Mr. Smith, "is in the territory of the United States, and last year our mines contributed not less than 48 per cent of the world's coal." That percentage measures the share of our coal industry in the world's business—for relatively few of the wheels of modern industry or commerce can turn unless coal furnishes the energy.

"However, our first impressions as to America's wealth may be too optimistic and we may need to think less of the millions of millions of tons of coal which we are told lie awaiting our needs and to ask for more details as to where this coal is and how much of it remains in the older mining districts. With the passing of time, in our rapid industrial expansion we may expect for our future coal output decreasing quality and increasing cost."

Exhaustion in Generation

"We should try to picture the rate at which we are using up the fuel reserves upon which so many industries are founded. The Pittsburgh coal furnishes two excellent examples of the rate of exhaustion. If it is mined at the present rate, the exhaustion of this coal bed, the largest in Pennsylvania, must be measured by the span of a single generation; at least we can see the peak of production close at hand if indeed it has not already been passed, and long before the end of this century coal mining in the Pittsburgh field will be a memory except where a mine here and there is working on odds and ends left behind in the big days of the Pittsburgh coal."

"The reason for my interest in the past and future of coal lies in my strong conviction that coal will count for more and more as the controlling factor in America's industrial future. Even now we can take our country's record of the highest per capita coal consumption in the world as the gratifying test of our industrial capacity."

(2.)
 The theory put forth last year by an economist that the balance of political power in Europe must be secured through a more equal division of coal lands seems to be indorsed in part in the pending peace treaty. At least during the war period we have seen France, despoiled of her coal mines, turning more and more to water power, and Italy, without coal resources, harnessing up her mountain streams for power, and England appointing commissions to consider ways and means of saving coal by getting the greatest possible energy out of the coal she burns. The American is recognized as the world's greatest user of machinery, and so these British commissions are now putting emphasis on cheap power as vital to industry. Great Britain, being without water power, must depend on coal.

"As I talk with electrical engineers I can foresee no encroachment of electricity upon coal for heating. That would involve too large a waste of energy. As one engineer described it to me, using the electric current for heating is like using your limousine as a truck; it is not good engineering practice."

Must Conserve Resources

"The duty that is plain to each of us is to get the most out of our resources. You can call that either exploitation or conservation as you will, but it is simply good engineering. As applied to coal, good common sense practice is to use as much coal as we need, but no more. Use coal when it saves or increases man-power, but save coal when something else will do the work as well. That is the water-power issue as I see it—the waterfall is not a rival to the coal mine, but is its partner. Hitch up the coal and the water—they work best in double harness."

"So the power program that I am advocating means not simply saving in coal; it means saving in man-power. It is with this purpose of economizing in both coal and men that a power program has been proposed by Secretary Lane. This project, which is now only in the vision stage, is to pool the power supply for the whole industrial area between Boston and Washington, in which is concentrated one-fourth of the power-generating capacity of the country."

(3.)
 My answer to your problem of getting a fair price for the coal you put on the market is that the coal-saving program I have outlined will increase the value of your coal. Price must be based upon cost, but value connects with use, and the result is that increase in cost necessitates higher prices until we might reach the point where the coal was not worth the price. It is already high time to give a larger value to coal, but I believe the increase in value can come only through conservation in use—through higher efficiency in burning the coal.

Efficiency Safety Factor
 Increased efficiency is really the factor of safety to you men in the coal business. A power program that works out any large gains in fuel economy is a program that you can afford to endorse. As Floyd Parsons put it in the Coal Age two weeks ago, if coal operators continue to be indifferent to the methods of coal consumption, the immediate future lies dark ahead, and private interests must at least give way to national economy."

George H. Cushing, managing director of the American Wholesale Coal Association, dealt with railroad ownership of coal lands and declared his conviction that the association should at once take a definite position as against control of the coal lands or coal mines by the carrier, and should urge congress to take this matter into account when returning the carriers to private control.

Mr. Cushing described various methods used by the railroads to swing coal prices according to their own interests and to gain control of additional coal mines in desired localities at prices which worked hardship on the independent operator forced to sell his property. He showed how such manipulations compelled the public often to pay a part of the railroads' coal bills.

"The aim of the railroad," he said, "is to reduce the price at which it buys its coal, to a point where it yields the operator less than the cost of production. When by these various devices that happens, it means that the railroad is paying less than the cost of production, and, therefore, the public is forced to pay considerably more than the cost of production. This means in essence that the public is paying part of the railroads' fuel bill. This is precisely what has been happening through a long period of years."

RETAIL FOOD PRICE REDUCTION SLIGHT

April 19, 1921

Fails to Reflect Drop by Producers and Wholesalers, Labor Department Shows

MARCH DECLINE 1 PER CENT

Philadelphia Quotations Show
Exact Average on 43 Articles
in 51 Cities

1921
Public Ledger Bureau
Washington, April 18

The contention of the Federal Trade Commission laid before President Harding yesterday that retail prices are not fairly reflecting the drop in producers' prices or even wholesale prices is borne out by figures on retail food costs for March made public today by the Department of Labor.

A decline of only 1 per cent in the retail cost of food to the average family in March as compared to February is noted by Labor Department statisticians on prices reported on forty-three food articles in fifty-one cities. The Government report shows the decline in Philadelphia was exactly the 1 per cent average noted by the department for the fifty-one communities. The greatest decrease, 4 per cent, was shown in Los Angeles and Rochester. Increases, however, were noted in Louisville, Chicago, Kansas City, Memphis, Milwaukee, Minneapolis, Peoria, St. Paul, Detroit, Omaha and Springfield Ill. As compared with the average cost in the year 1913, the cost of food in March showed an increase of 55 per cent in Philadelphia.

The evidence that retail costs have not kept pace with the decrease in wholesale and producers' prices is demonstrated in the figures for the year. March 15, 1920, to March 15, 1921. During that period retail prices show a decline of only 22 per cent, while wholesale prices have declined from 36 to 40 per cent and producers' prices in many instances from 75 to 100 per cent.

During the year retail prices of thirty-nine of the forty-one articles of food decreased as follows:

Potatoes, 63 per cent; onions, 60; cabbage, 52; granulated sugar, 48; rice, 47; lard, 36; crisco, 34; oranges, 30; navy beans, 29; prunes, 27; cornmeal, 26; strictly fresh eggs, 25; coffee, 24; butter, 23; canned tomatoes, 22; oleo-margarine, 21; flour, 20; bacon, 17; plate beef, lamb and nut margarine, 14; chuck roast, pork chops, baked beans and canned corn, 10; cheese, 9; fresh milk, 8; round steak, 7; rib roast, bread and corn flakes, 6; ham, hens and canned peas, 5; sirloin steak, 4; evaporated milk and tea, 3; canned salmon and rolled oats, 1 per cent.

The four articles which increased in price during the year were: Raisins, 20 per cent; macaroni, 4 per cent; cream of wheat, 1 per cent. The price of bananas increased less than five-tenths of 1 per cent.

READING COULD BE INDEPENDENT OF RAILROAD TIEUPS IF THE SCHUYLKILL CANAL WERE IMPROVED

Rdg Eagle 4/25/20

Members of the Schuylkill Canal Improvement Association believe that the recent railroad tieup caused by the "vacation" of employees will stimulate the campaign to reopen navigation from the anthracite fields to tidewater by way of Reading.

They point out that had the canal been open during the period that

freight embargoes embarrassed industrial plants in this and other cities to such an extent that many of them had to suspend operations, fuel could have been brought to Reading from the coal regions via the canal and food could have been shipped up the river from Philadelphia.

The railroad tieup emphasized with telling effect the incalculable advantage of having a supplementary means of transportation available in an emergency. Even in normal times, it is pointed out the water freight would supplement the railroads and have a tendency to keep down the rates.

The first annual convention of the Schuylkill Canal Improvement Association, which was formed for the purpose of canalizing the Schuylkill canal from the coal regions to tidewater, was held Wednesday, Jan. 21, 1920, at The Berkshire. Representatives were present from every city and town along the Schuylkill from Pottsville to Philadelphia. A permanent organization was effected.

Results Expected.
 Later a second meeting was held at Phoenixville when plans were further outlined. In the meantime, a committee representing the Im-

provement Association visited Washington and took up the matter with the inland waterways commission and those at the head of the movement, including J. W. H. Glass, of this city, chairman of the executive board, are confident that material results will soon develop.

There is now pending in the House of Representatives' committee on rivers and harbors, the Campbell bill, H. R. No. 6852, which vitally affects the Schuylkill canal. The interest already manifested by communities along the Schuylkill canal augurs well for the projected improvements.

With fleets of canal boats operating daily, during eight or nine months of the year, Reading could be placed in a position that would make it practically independent of railroad tieups.

PUBLIC ASKED TO HEAR DISCUSSIONS ON CANAL

Rdg News-Times 1/20/20

The general public is invited to attend the meetings of the Schuylkill Canal Improvement Association, which will be held Wednesday in the Hotel Berkshire. The first meeting will begin at 10 o'clock in the morning and an open forum will be held following a dinner at 6 p.m.

Delegations from practically all the cities in the Schuylkill valley will be present and take part in the discussion. Reservations for the dinner can be made by applying to Councilman D. Elmer Dampman, of Reading, who is treasurer. Judge Moyer, of Schuylkill county, has sent word that he regards the project as a national one, and expects to attend every session of the conference.

TRYING TO HAVE CANAL OPENED FOR BUSINESS

Rdg. Eagle 1/21/20.

WATERWAY CONVENTION IS HELD IN THIS CITY--ADDRESSES

DATE

State and other public officials, together with prominent citizens from various parts of the Schuylkill Valley vitally interested in transportation projects, were present at the opening session of the convention of the Schuylkill Canal Improvement Association, which is holding forth at The Berkshire. The convention was called mainly for the purpose of formulating plans for the enlistment of state and federal aid to reopen the canal as an artery of navigation. Delegates from various places along the route of the waterway were present and told how the canal situation, as it appears at present, affects their respective communities.

WELCOMED BY MAYOR.

Mayor Stauffer and members of council were among the guests. The mayor delivered the address of welcome in which he acquainted the visitors with the favorable viewpoint he and other city executives have come to regard the canal opening project.

The meeting was called to order by J. H. Zerby, of Pottsville, president of the association. W. L. Binder, of Pottstown, served as registration secretary. Rev. William B. Smith, pastor of St. Peter's Lutheran Church, offered prayer in the absence of Rev. Dr. Scott B. Wagner, of the Second Reformed Church.

MILLION TONS OF FREIGHT.

Mayor Stauffer in his address recalled when the usual time for the opening of the boating season was put off time and time again and finally the channel was closed to navigation. He said: "There is no reason why the canal, if restored to its proper functioning, cannot be of great public service as a carrier of heavy tonnage, thereby reducing congestion on the railroads." As an illustration as to some of the benefits that could be derived from such an inland waterway he told of how he knew of the plans of one concern which would be in position to start shipping at once for building purposes anywhere along its route 4,000,000 tons of slag. As it is now, the concern is unable to ship by any other method on account of the increased transportation rates.

The mayor stated that anything that could be done to improve transportation facilities should be supported by all citizens. He said they should regard it entirely as an industrial and commercial proposition.

SCHUYLKILL CANAL PLAN IS INDORSED

Norristown Daily Times - 1/20/20
Governor Sproul, Senator Knox and Seven Congressmen Back Project.

J. W. H. Glass, Reading, vice-president of the Schuylkill Canal Improvement Association made up of various towns and cities in the Schuylkill Valley has received letters from Governor Wm. C. Sproul, Senator P. C. Knox and from seven Congressmen, endorsing the project of opening the canal for traffic.

The Association will hold a convention at Reading tomorrow to consider ways and means of interesting the federal government in converting the old canal, now virtually abandoned into an anthracite coal carrier from Pottsville to Philadelphia about one hundred miles and to restore it to usefulness for general bulk freight traffic. J. H. Zerby, of Pottsville, is president of the association which organized at Washington, D. C., last month with Mayor John K. Stauffer, of Reading, as one of its boosters.

James H. Craig, deputy secretary of internal affairs and George M. Lehman, a state engineer acquainted with waterways systems will attend the convention.

The seven congressmen sending letters promising aid of a federal bill to restore the canal or otherwise supporting the move are Arthur G. Dewalt, Harry W. Watson, Thomas S. Butler, George F. Darrow, M. M. Garland, G.W. Edmonds and Guy E. Campbell, who has a canal bill now before congress.

NOW A NUISANCE?

Mr. Stauffer pointed out also that the canal in its present state had caused a big nuisance to municipalities along its route through its accumulation of deposits of culm. He explained to the delegates how during the time he served as councilman and up to the present this community has been persistently annoyed with the culm nuisance. "It is a growing menace and a nuisance," he said, "I believe that the canal association could do much towards remedying the matter if taken up with the proper authorities."

"Reading is showing a tremendous interest in all problems of traffic and initial steps should now be taken to have the canal opened. The matter of adequate transportation and proper terminals is becoming more serious. The canal project is really an intercity business matter and of great importance to thousands of people."

HISTORICAL SKETCH.

J. W. H. Glass, of this city, who is first vice president and chairman of the executive board, gave a historical sketch of the canal. He has been a leading factor in the matter of endeavoring to interest state and federal aid in putting the canal back to the original purpose it once served when it was considered as one of the leading transportation arteries in this state.

An interesting talk was given by Burd S. Patterson, secretary of the Lake Erie and Ohio River canal board of Pennsylvania. Mr. Patterson, a former newspaperman, spoke on "Co-operation and Legislative Action."

Practically all the other delegates voiced their opinions as to what policies should now be pursued by the association in striving after its objective.

TIME FOR ACTION.

"This is the time for deliberate action.

"Unfortunately, canal movements have from time to time been placed before Congress, but have always been pushed aside by that body," said J. H. Zerby, of Pottsville, president of the organization. He stated that considerable work must be accomplished by the association before Feb. 21, at which time the rivers and harbors committee of Congress convenes and when it is hoped that body will consider the association's efforts in a favorable light.

Referring to control of waterways by railroads, Mr. Zerby said: "I'm not opposed to corporations, but we must not let them scare us. The bulk of the larger corporations I have found at heart are not philanthropic. All that we must expect from the railroads in this project is that they play fair with the general public."

Mr. Zerby spoke of the drawbacks that have been suffered by Schuylkill Haven, Port Carbon and other places in the coal regions through the canal having been closed.

This afternoon there were addresses by James H. Craig, deputy secretary of internal affairs of Pennsylvania, and George M. Lehman, engineer, Department of Internal Affairs of Pennsylvania.

At 6 o'clock this evening there will be a dinner at the hotel, followed by an open forum.

6 YEARS' LEAP IN LIVING COST

Increase Has Been 104.5 Per Cent. Since Pre-War Times

(By Associated Press.)

New York, Sept. 18.—Report of a survey of the cost of living contrasted with living costs of pre-war times is made public by the National Industrial Conference Board. It shows the increase in the six-year period ending July 1 has been 104.5 per cent. There was an increase of 18 per cent. in the last year and 5 per cent. from March, 1920, to July.

Food increased 110 per cent. in price in the six-year period; shelter 59 per cent.; clothing 166; fuel, heat and light 66, and sundries 85.

These percentages are based on retail prices in large cities.

Figures supplied by 361 real estate boards and brokers, Chambers of Commerce and civic organizations in virtually all cities having a population exceeding 50,000, gave a rent increase percentage of 58. Eighty-six cities, among which were New York, Chicago, Philadelphia, Detroit, Los Angeles, Pittsburgh, Baltimore and Cleveland, showed increases of 50 per cent.

Hard coal prices increased 81.4 to 85.5 per cent., soft coal 103.1 per cent. and gas and electricity for domestic use 15 per cent.

BOY MEETS DEATH IN CANAL

Phila. Record Apr. 10, 1916
Icy Plunge Fatal Despite Brave Efforts at Rescue.

Although brave efforts were made to save Frank Miller, a 14-year-old boy, of No. 4672 Umbria street, Manayunk, who fell into the Manayunk Canal, at Leverington avenue, about a block and a half from his home, last night, the boy died in St. Timothy's Hospital. Death was caused by shock and chill caused by the ice-cold water, according to the doctors.

Young Miller and several boy companions were playing on a lumber pile about 6 o'clock last night when Miller, losing his balance, fell into the canal, sinking almost immediately. John Wrigley, 42 years old, a neighbor living at No. 4745 Umbria street, who was passing, heard the screams of the other boys, and, running to the canal bank, dived into the icy water.

The boy, who was still breathing, was taken to the hospital, where he died about 8 o'clock. Wrigley, who is suffering from the shock of his experience, is under the care of Dr. D. D. Custer, a police surgeon.

NANTS RIVER POLLUTION BY COLLIERIES STOPPED

Special Dispatch to The North American

POTTSVILLE, Pa., June 12.—A suit to test the right of coal companies of the state to dump coal dirt and refuse into the rivers is on trial before Judge Bechtel. The defendant is the Lehigh Coal and Navigation Company. Jacob Zehner, the complainant, asks that the coal company be restrained from polluting the waters of the Schuylkill river, because of which pollution his flour and saw mills are blocked from water motive power.

The defendant takes the position that they are not liable for pollution of the stream by acidulated mine water. It admits that for every ton of coal mined twenty-five tons of water are hoisted, impregnated with coal dust, and declares that if the privilege of pouring these great streams of water into the rivers are denied to coal companies, they will have to go elsewhere.

CANNOT KEEP THE CANAL OPEN

FELIX'S DAM IS CAUSING THE TROUBLE

Rdg. Eagle 7/11/16

NOW PAYING FOR THE CARELESSNESS OF YEARS AGO — WHAT OF THE FUTURE?

While preparations have been made to handle the coal to be delivered at the new wharf of the Schuylkill Navigation Co. at the foot of Blue Mountain dam, the conditions of the dams north of this city have been a source of great disappointment.

During a visit to one of the locks north of the city, the Eagle learned that Felix's dam, which is known as the three-mile level, is giving the canal people all sorts of trouble. Recently the channel was opened to a depth of eight feet after a hard day's work. The following morning there was less than four and a half feet of water.

Today there is not more than a foot of water running over the dam. It may be possible to get the empty boats up stream, but when loaded it is feared that it will be impossible to drag them through. The company has never had so much trouble in this level. It is thought that it is due to the break in the dam long ago, during which thousands of tons of culm and mud were washed into this level.

In the early days, when hundreds of boats were employed on the canal, all of these dams were free. The freshets which have occurred in recent years have gradually carried down thousands of tons of culm which has found lodgement in these dams, and it would cost a vast sum of money to clear them of all.

H.C. L. 68 PCT. ABOVE 1914; 7.7 BELOW FEBRUARY LEVEL

Food Shows Greatest Price Decrease
200,000 Men Idle Here

Living costs in Philadelphia are 68.6 per cent. above those of July, 1914, it is reported by the National Industrial Conference Board.

This is a drop of 7.7 per cent. below the figures reported by the Board in February. The drop in March was 14 per cent. in food; clothing, 5 per cent.; fuel and light, 1 per cent.; sundries, 5 per cent., with shelter at the same level as October.

Among the wage reductions made in this city are: Lumber and its associated branches, 10 to 20 per cent.; metal trades, 14½ per cent.; tin plate and its allied groups, 20 per cent.; cabinet-makers, 13 per cent., and leather, 25 per cent.

A cut of 23.93 per cent. for workers in the building trades is scheduled to become effective May 1. The new scale would give the following rates of pay per hour:

Carpenters, 90 cents; bricklayers, masons and plasterers, \$1; cement finishers, 80 cents; dock builders, 80 cents; elevator constructors, 90 cents; electricians, 90 cents; iron erectors, 90 cents; lathers, 90 cents; marble setters, 80 cents; painters, 80 cents; plumbers, 90 cents; slag roofers, 80 cents; slate and tile roofers, 90 cents; sheet metal workers, 90 cents; steam fitters, 90 cents; soft stone cutters, 90 cents; granite cutters, 90 cents; tile setters, 80 cents; hoisting engineers, 90 cents; pipe coverers, 80 cents, and automatic sprinkler setters, 80 cents.

Figures based on estimates of employers show there are nearly 200,000 workers unemployed in this city at present. Sixty thousand of them are in the building trades.

Channel Filled.

One bad feature is that every heavy rain which causes the Schuylkill to rise above the ordinary shifts the culm and fills up the channel so quickly that it is simply impossible to keep it open. Years ago the dams held immense bodies of water and the depth varied from 25 feet.

Kissinger's, Shepp's, and Fink's dams, all of which are below Hamburg, are said to be in pretty good shape and the boats have little trouble in getting through, although they have gradually been filling up with culm washed down from the vicinity of Pottsville and Tamaqua. It is said that the condition prevailing at Felix's dam is similar to that of the Blue Mountain dam.

Thousands of Tons of Coal.

It is claimed by some boatmen that if the culm was to be removed from all of the dams, many thousands of tons of the smaller sizes of anthracite, such as rice and buckwheat, could be secured. Boatmen have very little hope of doing much boating this season. Some coal is now being loaded at the dock for Hamburg, but nothing this side.

Carelessness Is Costly.

For years the coal companies were more or less careless in depositing the culm near the streams. Heavy rains washed it into the rivers and its tributaries. Finally it was brought down the valley by the freshets. This has been going on for years and eventually the black deposit will reach Fairmount Park.

These deposits have ruined hundreds of acres of farm land as far south as Douglassville, for which the coal companies have been obliged to pay heavy damages.

Heavy Damages May Be Claimed.

Pottstown, Phoenixville, Norristown and Philadelphia get their water from the river. The culm and sulphur may eventually ruin this supply. The black menace has now reached Pottstown. There is a possibility this factor may mean damages suits that will be far more costly than the damage to farm land along the river.

Now the culm is practically closing the canal at some points. This may eventually be given as the cause of stopping navigation. The company enjoys a large income from its water rights at different points between here and Philadelphia.

What of the Future?

The question is being asked: Will the company retain its charter, or will it become the Union Canal Company? The latter was in the courts of Pennsylvania. It was contended that when the Union canal was abandoned the land went to the abutting property owners.

In years to come similar litigation will likely be instituted in the courts of Schuylkill, Berks, Montgomery and Bucks counties.

AUGUST 24, 1922

RISDON PLAN TO SOLVE BOROUGH ELECTRIC LIGHT-MAKING PUZZLE

Calls for Diesel Engines, Which Use Crude Oil; Production Cost as Little as Water Power or Less.

WHARF IS MENTIONED AS A POSSIBLE SITE

Councilmen Pifer and Fratt Much Impressed; Matter Will Be Laid Before Legislative Body at Early Date.

A plan will be laid before Norristown Town Council in the near future relative to the electric current supply for the borough. It involves the erection at some point other than the present site of a power plant which will house engines of a novel design—engines, according to authorities which will produce the desired current at a cost as low as that produced by the present water turbines and possibly lower.

The lease on the building housing the borough's electric light plant will expire in November next, and a number of Councilmen are desirous of having the municipality to continue in the supplying of juice. One group, of which George Fratt and George Pifer are members, consulted William G. Risdon, Sr., who for many years has had charge of the operation of the town's plant. Mr. Risdon answered the appeal by laying before them the outlines of the plan which is to be explained to the body at an early session.

Reference to Diesel Engines
Mr. Risdon advocates the installation in a suitable structure of generators driven by Diesel engines of the most modern design. These are internal combustion engines, and use as fuel the very lowest and cheapest grade of crude oil. They operate on practically the same principle as does the engine in the present day automobile, no provision being made

for vaporizing the scantily volatile crude oil. This has been done for many years, but constructional features have been steadily improved upon by the designers until today engines are on the market which operate at a less cost than the most economical steam engine. Mr. Risdon has gone on record as saying that the cost of production with these will be as cheap as, if not cheaper than, the cost of production utilizing water power—one-half cent per kilowatt.

Mr. Risdon, in an interview with a representative of The Times, last evening, cited recent experiments made by the United States Navy in which a large ship equipped with Diesel engines made a run from New York to San Pedro, California, a distance of 4800 miles, the cost of operation being \$12,000 less than the cost of the same voyage made by a steamship of the same class as the vessel experimented with.

Operation Cost Cheap

"The first cost of such a plant," said Mr. Risdon, "is somewhat greater than the cost of a steam installation of the same power rating. But the cost of operation is astoundingly cheaper and the useful life of the plant is such that the extra cost of installation is quite justified. The actual cost of production, day in and day out, may be lower than the cost with water power. And with such a plant one may utilize any convenient location. It is not necessary to remain beside a water course."

"People unfamiliar with the problems that beset the operators of power plants do not realize all about power. Indeed, it is surprising to most people to learn that the cost of keeping a water installation working is usually two thirds of the cost of steam plants. Wear and consequent loss of efficiency and power at the turbines constitute one big factor. Another is the almost constant cleaning out of races and channels—hereabout they fill up at an alarming rate. These are only two of the things which keep the cost of operation up."

"And in the case of this particular plant there is the peculiar circumstance relative to the water. These make it imperative to have ready at all times a complete steam equipment which may be turned to when the water power becomes suddenly unavailable. Under the terms of the lease of this building we are entitled to one-half the flow of the river until the water falls for any reason below the top of the dam. When that occurs we may be shut off at an instant's notice."

"Personally, it is my opinion that assuming condemnation proceedings in the case of the quarters of the present plant seemed advisable, they should have been under way over two years ago. It is also my opinion that the cost of litigation and the cost of putting the plant in shape, if we won, would exceed a half a million dollars; and it is questionable, considering the drawbacks that go with the plant, if the place would be worth that expenditure to the

"At present we are using about two hundred horsepower in manufacturing the current consumed by our lights and borough equipment, but the borough is on the verge of an inevitable increase in the number of lights installed and maintained and in a surprisingly few years four hundred horsepower will hardly suffice to keep us supplied. Among other things, this would mean the installation in the near future of a complete steam plant to supplement the turbines, nearly the cost, one might say, of the erection of new quarters."

"In view of the navy's experiments and those of several Middle Western towns, which are solving their lighting problems in the same way, I feel justified in advancing the plan of Diesel-driven generators, housed any place the Councilmen may see fit, as one practical solution of our difficulties. I feel, too, that the expansion of the future will justify the choice."

Fratt and Pifer Impressed
Councilman Fratt said, in an interview, that he is emphatically in favor of the town making its own current if any economical way can be found to do it. Councilman Pifer has repeatedly voiced similar views and both, from years of association with Mr. Risdon, entertain a high respect for his technical opinion. It is likely that Messrs. Fratt and Pifer will sponsor the plan, and will present as soon as it is available, complete data on the cost of installation.

In outlining a few of the features which contribute to the high efficiency of the Diesel engine Mr. Risdon mentioned the successful compounding system, which utilizes the only partially-spent gases from the high compression or explosion cylinder to actuate a low pressure piston as is done in the compound steam engine. In the present automobile motor these partially-spent gases are discharged into the muffler—she waste. Then, too, there is the total elimination of the electrical ignition system common to the familiar gasoline using motor. In the Diesel, the heat of compression—the compression is very great—is used to fire the charge. So great is the heat in normal operation that relatively complete combustion is obtained, eliminating largely the carbon deposits which tell all too plainly the tale of waste in the types with which we are familiar.

Mr. Risdon called attention to the fact that the borough owns a strip of ground along Stony Creek, below Main—the Borough Wharf—which might be used as a power plant site.

150 FT. OF SWEDE ST. DAM GIVE WAY

Thought for Time Norristown Water Service Would Be Menaced

FURTHER BREAK UNLIKELY

Company Officials Are Optimistic, But Prepared for Emergencies

As a result of the rise in the Schuylkill river, with the accompanying flow of ice and debris, about 150 feet of the dam extending from the foot of Swede street to the Bridgeport side gave way, Saturday afternoon, from the Bridgeport end, with the result that for a time the water supply service of Norristown was seriously threatened. It was feared that, with the break in the breastwork of the dam, the entire length would give way and thereby remove the water shed which has been maintained in and around the lower end of Barbadoes Island, on the Bridgeport side of which is located the big intake of the Norristown water works. Luckily, however, but one section of the dam collapsed. There is but a narrow opening for the water to rush through, and a water shed sufficient to meet the requirements of the intake is still maintained.

However, just as soon as the river recedes below its normal state, whereby no water shed could be maintained, the operation of the intake will be so seriously affected as to make it necessary to procure other means of maintaining the water supply. There is no apprehension that for a time, at least, there will be any serious menace. The main danger, of an immediate character, is the possibility of a severe drain that might arise through a large fire and the operation of the fire-fighting apparatus therewith.

The intake of the water company is located at a point about 400 feet above the Bridgeport end of the dam, on the island, facing the Bridgeport shore. It is sufficiently low to meet even ordinary emergencies, so long as there remains a pool or water shed above the line of the dam. For the first time has this

shed reached a state where the level of the water is much lower than the breast of the dam and on the verge of exposing the mouth of the intake.

Officials of the water company, together with engineers and the officers of the Schuylkill Navigation Company owners of the dam made a careful examination of the condition of the dam, and are satisfied that, if there is not further extraordinary rush of ice and debris down the stream, there will be no further break, and that the present break will not be sufficient to seriously interfere with the water supply of the town. Steps, however, will be taken, if at all possible, to relieve conditions in the vicinity of Port Indian, where a jam is reported just above Catfish dam, so as not to further threaten the Swede street dam.

The break in the dam came with a tremendous rush of ice and debris. It was not unexpected, however, as the condition of the stream, Saturday, assumed a serious menace and men were on the watch. The damage to the dam will be several thousand dollars, in view of the difficulty which will attend the repairs.

With the break, cakes of ice, shattered motor boats, great quantities of lumber and debris of every character, which had been held in restraint, rushed through the opening, and for a time the torrent was of tremendous force, carrying with it everything in its path.

Since the break, the water is below the level of dam at all points except where the break occurred. With the lowering of the water here, there also came a lowering of the canal water.

At the Norristown water works it was stated, at noon, today, that conditions, so far, are satisfactory, and that a sufficient supply of water is being obtained, but that steps had been taken towards running the plant the full 24 hours to meet all possible emergencies.

Tom Phila Record 9/12/17

Property of

HISTORICAL ASSOCIATION

Port Clinton, Pa. 19549

An odd problem was put to the Federal inspectors of steamboats this summer for solving. The collector of customs received a letter from an old captain in Reading who operates a little excursion steamboat line that nobody outside of Reading seems to have known was in existence. The boats operated by the captain were the Carrie and the Rosa, and the captain seemed to have fit of conscience, for he wrote that, although he had been running his boats for 49 years, he had never had them inspected or equipped as the Federal Government requires with life-saving paraphernalia. The question evidently was whether the water on which the conscientious objector was running his boats came under the jurisdiction of the Federal law. Accordingly the letter was turned over to the steamboat inspectors. The Philadelphia office promptly put the matter up to the main inspection office in New York. The New York office referred the old captain's letter to Washington, where the Department of Commerce sagely gave the decision that the Schuylkill above the dam is "an improved river," hence comes under the rivers and harbors act. Such a question had never been up before, so it is a new thing for a river above a dam to be considered navigable. Inspectors say the captain's boats and recommended the usual equipment—fire pump and hose, life preservers and boats—but the Rosa and Carrie are not running at present.

DATE.

SCHUYLKILL CANAL

NOW COMING BACK

No. 1111 - 8/1/20
 Freight Congestion Enables
 Old Disused Waterway to
 Come Into Its Own

Millions in Coal Already Pass Down It Yearly; to Be Boored to Philadelphia

Special to The Inquirer.

READING, Pa., July 31.—Transportation through the upper reaches of the Schuylkill Navigation Company's canal is assuming larger proportions. Dredging of the canal is going on at various points where accumulations of mud and other deposits have shallowed the channel. In the water yard here a fleet of barges are moored on which repair work is underway. In the canal proper long lines of barges are tied up against the banks. A new dredge is in course of construction in the water yard. Every thing indicates that resumption of water traffic is planned and that if carried to its legitimate end there will be a return of the old days when the towpath was a hard well-beaten trail and commodities of various kinds found their way from inland districts to city markets at lower rates of freight than demanded by railroads.

In reality the canal through the upper sections has never been really closed. Thousands of tons of coal have been shipped through it annually. But coal was about the only commodity that was routed over the canal. There was a reason for it. The canal had become the property of the Philadelphia and Reading Railway. So long as sufficient rolling stock was available to move freight there was no reason for shipping by barges. But freight cars just now are holding a star place among articles listed as "short." In fact they have become so scarce that it has been necessary to impose embargoes to relieve food and fuel shortages at various points. Just now the Interstate Commerce Commission has a ruling in force which gives coal shipments to the great lake ports preference over shipments to other points and the ruling is being effectively enforced. The railroads are being compelled by the government to utilize a certain percentage of their coal cars for the lake shipments regardless of the demands of other traffic. It is a stringent order. Neither railroads nor coal operators favor it. The latter object for the reason that coal prices in the lake region are lower than at other points. They would not mind this so much if the railroads could furnish enough freight cars to handle shipments to the higher markets. But this the railroads cannot do. For the situation but one solution is offered. The canals.

Specie No Object.

Barge transportation is slow. But slow deliveries are preferable to no deliveries. Furthermore, the experience of the government during the war in the use of inland waterways conclusively proved they could be utilized to advantage in the transportation of certain commodities. Among them was coal. No reason could be found why a large percentage of the coal coming from the Pennsylvania mines should not be shipped by canal. At least no reason was obvious except that for years there had been no real necessity for doing so. The car shortage, however, changed the situation. Now there is a reason and one which even the railroads admit will operate for several years, possibly without cessation, the industrial development is faster than railroad equipment increase can possibly be and with production outstripping shipping facilities by rail waterfreighting must be reverted to unless, and it is admitted by those familiar with conditions that at best its possibilities are limited, the motor truck train takes the place of the steam freighting system. This is highly improbable. It is pointed out, owing to the greater cost of transportation as compared with the railroad service.

Although a small canal as compared with others in operation the little water way which practically parallels the Philadelphia and Reading line has been in its time a great commercial artery and there seems no reason why it should not again become one of the most important feeders for the Port of Philadelphia. It is simply a question of operation. Naturally it will require improving. It will have to be deepened and widened; new locks throughout its entire length are necessary. The present barge fleet must be replaced by a fleet of modern canal boats. The tow path must give way to the tugboat and motorized "pluggee." But all of this is easy to accomplish. Time is the principal element involved. It cannot be done in a month. It might take two years. But once realized central and western Pennsylvania have opened them a sure and expansive traffic agency which may be depended upon for nine months in the year throughout its entire length. Furthermore, the period during which the canal is certain to be free from ice blockades is that when the heaviest shipping is being done. So far as the coal regions are concerned, it is natural that the bulk of the shipping take place during the late spring and summer months. Otherwise there would be coal shortages at terminal points during the fall and winter.

Coal Now Being Carried.

At present the canal is being extensively used for the transportation of coal from Fort Clinton to Phoenixville. Unless there is some unseen condition between Phoenixville and Philadelphia which prevents the use of the little waterway all the way to that point, there is no reason why coal barge trains should not be engaged in delivering coal at the later point. In fact while it might be impossible to ship the city's entire coal supply by canal, and at lower freight charges than by rail, an appreciable percentage of it could be delivered in that way, and this may be one of the ultimate objects in view by the company controlling the canal.

through the Union canal with the system of inland waterways north of here. But latter canal has been out of commission for several years. It might be reopened to advantage.

Inland water transportation has gone too far in the course of recent reconstruction to slip again into disuse. The tendency from now on will be to develop it. This follows from the recognition of the broad principle that it is a criminal extravagance on the part of the State and the Federal Government to permit the improvements of this character made during the past century to lapse into disuse. During the period when the railroads were being developed such a policy may have been excusable. They needed every pound of freight they could carry to come through with their expansion and improvement policies and were, economically, justified in demanding it. But the initial railroad period, so far as Pennsylvania is concerned, is ancient history. In the situation there is nothing to justify throttling a competitor who for the future can be nothing but a valuable ally. This is recognized by conservative and broad-minded railroad directors and explains the change in the attitude of the railroads in general toward "canal competition."

As members of the Inland Waterway Association have discovered, a tendency is evident in railroad circles to aid rather than oppose inland waterway transportation. The reason is simple. Railroad interests have discovered there is a certain class of traffic they never handle except at loss and that is primarily the traffic the canals bid strongest to get.

No more picturesque stretch of country exists in America than is traversed by the Schuylkill canal. Through a section of the State rich in earliest romance and later the depository of much of our national history, it winds its way connecting here and there with the beautiful little river whose name it takes, to eventually merge itself with its traveling companion in the very heart of Philadelphia, from whence entrance into the Delaware River is short and easy.

Much of the way it travels through a valley enclosed by picturesque woodlands or flanked by vast stretches of farmlands, the most productive in the Commonwealth. It is a lazy little canal that for almost the whole period since the days of the Civil War has been working slowly on the problem of self-elimination. At places it has been quite successful in this direction, according to dredging masters who have occasion to interrupt it in its pastime. But, nevertheless, it exhibits indications of being a husky little waterway that only needs the right kind of encouragement to prove to Pennsylvania that it is about as staunch a little friend as the State ever had, for it gives promising assurances that if helped out a little it will carry its share of the State's traffic burden and do it for a nominal charge as compared with what the service is costing the people of the State at present.

Of the canal it may be said that the problem of terminal facilities solves itself. In the lower Schuylkill River, below what is known as Fairmount Park dam, where the canal passes through the last lock into the river, exists vast opportunities for a first terminal. Still further down stream, where the Schuylkill River enters the Delaware, still greater terminal facilities exist, while further in the Delaware River itself ample opportunities abound for the organization of spacious terminal conveniences such as are required for handling ocean-going traffic. In this respect the little waterway has a decided advantage over any of the canals in the East. It will cost an enormous sum to develop these terminal facilities. But once acquired they become fixed improvements, assets to the canal company requiring little upkeep expense. Would such an extended development pay?

Lapse Not Likely
 Probably not if the country is to revert to pre-war conditions, industrially speaking. At least that is the opinion candidly expressed by advocates of the inland waterway development generally. At the same time the position is taken by them that there is no likelihood of such a thing happening. Every indication makes it appear certain that an

enormous expansion in traffic is assured. Furthermore, with the development of the Port of Philadelphia there is sure to come a great increase in Western shipping as well as in the opposite direction. Much of this Western traffic goes into the territory tapped by the canal. It will not be a question of towing back empty barges. They will go freighted. Of course, the up-canal course is more difficult and more expensive. But that can be taken care of in arranging tariffs. Looked over in the view of future developments things indicate a profitable business through the canal.

One advantage afforded by canals in operation comes through the establishing of the canal ports along the route. These make it possible to do not only a through business, but local carrying as well. It makes it possible for the produce of a given territory, whether farmers or manufacturers, to organize their shipping to take advantage of the cheaper water route, and while they cannot distribute their entire products over the canal routes, an appreciable amount can be shipped in that way at a freight rate that makes it certain they will be given preference in selling markets thus reached. In turn this builds up their business and they become greater shippers into territory unreach'd by the canal. This going round the circle has not been lost on railroad managers, who have come to recognize that dividends increase in proportion as industrial production grows, and that the long-headed economic policy for them in their own self-interests is to advance every agency—which in turn means increased production. The growing attitude of the railroader toward inland waterway development suggests that he is by no means the inveterate opponent of the barge and the towpath.

Business in Millions

Millions of dollars' worth of freight, particularly coal, is being shipped through the upper Schuylkill canal annually, it is said, while from the policy in evidence in the development of the canal through this section, a greater volume of business is expected.

How long a time will elapse before the canal is in operation throughout its entire length will depend largely on the insistence of the demand on the part of the public that it again be made a traffic route. Manufacturers, Chamber of Commerce bodies, industrial organizations throughout the territory tributary to the canal are the agents which must become active in assisting its development. Assurances must be given that sufficient traffic will be provided to insure the canal operating on

a paying basis. Its coming back is less a question of coercion on the part of government and State than one involving an assurance that it will meet necessity. Where this necessity exists through this section the canal is in operation. At present its activities are confined almost exclusively to transporting coal.

But allied as the coal industry is with other existing interests, there is no legal or moral reason why it should monopolize use of the canal. However, with the canal used exclusively for transporting coal, and used for this purpose over its entire course, it would serve a great economic end in providing cheap transportation to markets throughout its entire length.

No one familiar with the development of the inland waterways during the past ten years or with what is now being undertaken in other sections of the country in opening them up doubts that they will play an important part in traffic history of the future. Every contention put forward against their development has been successfully refuted by experience. Where proper allowances are made for the conditions surrounding the few failures attending the development, even the latter are seen spelling success. That the Schuylkill canal is destined to play a significant part in inland waterway transportation is regarded as inevitable by those familiar with its history, its surroundings and the developments taking place throughout the country surrounding it. They see it in the near future with its long strings of barges at Philadelphia terminals, its local ports and its traffic organization performing a great economic service and aiding materially in the development and maintenance of future prosperity in Pennsylvania.

Philadelphia Record,
 September 6, 1917.

Along the Schuylkill Canal between Port Clinton, the head of navigation, and Reading, are a number of barges loaded with coal, on their way to this city. Whether they will reach the locks at Fairmount before winter is a problem the officials of the Schuylkill Navigation Company or the Philadelphia & Reading Railway Company, lessees of the canal, are trying to solve. The barges are stuck in the canal and dams along the route, owing to the water being too shallow to float them. The shallowness of the stream is due not so much to the lack of water as it is to the gradual filling up of the channel by coal culm, which is washed into the river and canal in large quantities at every heavy rainfall. Ever since navigation opened in the spring it has been necessary for the company to have the large dredging machines constantly at work deepening the channel so that the loaded barges could be floated. As soon as one part would be opened up, a heavy rain would close up other parts. The gradual filling up of the river will, in a few years, it is feared, prevent the running of boats on the Schuylkill. Fairmount pool, as the dam above the dam breast at Fairmount is known, and which extends to Manayunk, is also filling up. This can be seen at many points along the river, in the small islands or sandbars that crop up above the surface of the water. In places where the water used to be 20 or more feet in depth there is not depth of water sufficient to float boats drawing five feet. Peter's Island, a short distance above the Columbia bridge, is gradually being lengthened by the accumulation of cinders, sand and other debris washed down by

Philadelphia Record September 28, 1917.

Dog Martyred City's Water.
 Schuylkill Haven, Pa., Sept. 27.—A dog which fell into the Schuylkill River here came home in such a filthy condition that he was killed by the owner as the only solution, yet the same water is used for domestic purposes farther down the line. The slow running waters of the Schuylkill have rarely been so filthy.

the slow-going current from Manayunk. In some places the water is so shallow, when the water is normal, that a man could wade from one shore to the other without wetting his head.

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 Port Clinton, Pa., 19549

HOPE FOR CHEAPER COAL WITH MOORE FOR MAYOR

Record 8/18/19

Anthracite League Foresees Interesting Result of Electing Waterways' Friend.

SEEK CANAL COMPETITION

Railroad Promises Broken and Obstruction Asserted in Statement.

Special to "The Record."

Pottsville, Pa., Aug. 17.—The election of J. Hampton Moore as Mayor of Philadelphia might have the direct effect of lowering the price on anthracite coal in Philadelphia \$1 a ton, declares the Anthracite Consumers' League, of this city, an absolutely non-partisan organization. Officials of the league believe that Moore's election as Mayor would greatly hasten the day of completion of waterways between this region and Philadelphia, which would be adequate to handle the coal traffic at much less figures than the enormous freight charges loaded onto the business at present.

Frank C. Reese, secretary of the league, has been an active worker for the rehabilitation of the waterways of the State and especially the reclaiming of the Lehigh and Schuylkill Canals. He gives Moore credit for accomplishing more for the deeper waterways of the country than any other Pennsylvania Congressman has been able to accomplish in half a century.

The cost of coal at the mines is admitted by the operators to be not more than \$3.54, taking an average ton, in which the cost of the more expensive sizes has been computed. League officials declare they cannot, after two years' investigation, find what is the justification for the present high prices in Philadelphia of nearly four times this cost.

They believe the reopening of the two coal region canals, on a scale which would permit them to carry barges of 1000 tons each, would work a radical revolution in the coal trade. They point out the necessity of competition between waterways and railroads if the public is to get the benefit of the cheapest service.

Railroad Promises Broken.

"When the Schuylkill Canal was practically abandoned," declared league officials in a statement issued today, "the excuse was made that coal could be shipped on the railroads to Philadelphia at a cost of 35 cents a ton, which was cheaper than it could be handled on the canals. The public can readily appreciate how this promise has been kept. Ever since the canals have been out of competition with the railroads the cost of transportation has been steadily rising, until it is now approaching \$2 a ton."

"Certain sizes of anthracite could be carried on the canals, which would obviate the shifting of cars on the railroads, which now is a factor in raising the cost of coal transportation, and, therefore, the whole problem of cost to the public would be solved to some extent."

"The feasibility of the Schuylkill & Lehigh and Schuylkill canals for heavy traffic has often been questioned, but before the best expert commissions no adequate reason has been presented why there would be obstructions in a physical way to the operation of these waterways, and this, of itself, offers the best solution to the country of reducing the present high prices of coal."

Obstruction to Be Expected.

"While the canals are idle, choked at the terminal points in this region with coal dirt, experiments have been made of taking coal to Philadelphia and Reading with motor trucks. It has been found that coal can be handled in this small way as cheap as the railroads now handle millions of tons, transportation of which should be cheap in correspondence to the amount of the traffic."

"Just at present the coal corporations, in conjunction with interlocking interests, are losing no opportunity to allow the heavy rains and floods to fill up the coal region canals as completely as possible. It may be expected that every obstruction possible will be placed in the way of putting these transportation routes back into active public service, but all must admit that the placing of such an active friend of water transportation in the chief executive's office in Philadelphia would give great encouragement and impetus to the movement."

"At present the amount of coal carried on the Schuylkill and Lehigh canals would hardly keep three furnaces in operation. We expect the renewed Senatorial investigation of the coal business to take up this feature."

SCHUYLKILL ICE JAM PUTS WATER SUPPLY IN PERIL

Continued From Page One

river bed, it was but a plaything for the river, gigantic with its fifteen feet of additional waters. Battering, splintering and lifting, the river ripped the dam to pieces and carried it downstream to jam it a half mile below in the great ice pack at the Girard avenue and Pennsylvania Railroad bridges. This was on Saturday afternoon and evening. The loss of this temporary structure was estimated at \$8000, and its timbering increases the menace of the Brodignan ice pack it reinforces.

The heaving, groaning ice field, with its heavy timbers, its logs and stumps and river flotsam extends as far as can be seen—sometimes five feet above the level of the waters; sometimes more. Apparently, the jam is from ten to fifteen feet thick and hourly increasing.

The crest of the flood has carried away nearly 200 feet of the dam near Norristown. There is a big jam at Port Indian, two miles above Norristown, which is threatening to break momentarily. Should this give way, it is feared, that the balance of the Norristown dam would be swept downstream and wreck the high piers carrying the Philadelphia and Western Railway over the river. Upon the holding of the Port Indian jam might even depend the safety of the Fairmount structure, as the additional strain of more ice might surmount the intervening obstacles.

Besides entailing thousands of dollars damage to the Schuylkill Navigation Company, the flood is endangering the water supply of Norristown, as the town obtains its supply from the Bridgeport side of the river, where the break in the dam has occurred. The navigation company will have immense difficulties to repair the damage this winter owing to the difficulty of getting labor in the cold weather.

Anxious Hours For Manayunk

Manayunk is laboring under the most anxious hours in its history. The great ice cakes pouring down the river are building the ice pack nearer and nearer the bottom of the river. Should the channel become choked to the bottom, the waters will back up and flood its twelve

or fifteen mills, other river industries and homes. The waters were slowly backing up last night as the river slowly declined under the shrinkage of supply by the cold snap.

The ice is frozen solid between the Fairmount dam and Girard avenue bridge and the water is passing in under it. It is believed that this barrier, against which the river has thrown up the tremendous jam, will hold during cold weather, but a warm day would weaken the ice and the herculean pack would sweep seaward, destroying the Fairmount dam and thousands of dollars' worth of property bordering the river below.

From the Fairmount dam is pumped daily approximately 135,000,000 gallons of water by the city. It is the water supply source of all of West Philadelphia and a third of the downtown section.

Holding back this invaluable water supply is a wooden crib dam, built originally in 1817 and rebuilt back in 1874. For three years the bureau of water has been pleading with the city to build a new concrete dam, forcefully presenting the danger of continuing to depend on this ancient wooden structure, but the city, engrossed with extravagance in other lines, has refused to act.

"No one can tell what is the strength of this wooden dam or how much it has deteriorated," said Chief Davis last night. "I believe that something must be done in the morning. I shall consult with Director Webster, of wharves, docks and ferries, about taking steps to relieve the menace immediately. I was never faced with such a situation and know nothing about dynamiting. It doesn't seem as though there could be enough dynamite in the city to break up that ice. It is an event of a lifetime, such a jam.

"The ice will be more solid in the morning and better for dynamiting, I should think. We would probably commence to dynamite near the Fairmount dam and work upstream."

Webster Promises Aid

"The jam appeared to me to be assuming serious proportions when I saw it Saturday afternoon," said Director Webster. "I thought then something would have to be done. I shall be glad to co-operate with Mr. Davis if called upon, but it is his proposition, as it threatens the city water supply."

The river was slowly receding last night. Saturday noon six and a half feet of water was flowing over the Flat Rock dam. Only eighteen inches was going over late yesterday afternoon. The river, however, was still running full of immense ice floes and heavy flotsam. An immediate break of the cold spell and a resumption by the Schuylkill of its rampage is the menace facing the city, as the Schuylkill is still nearly ten feet above normal.

The flood at its crest on Saturday night crept up over the East Park drive in Fairmount Park below Strawberry Mansion and also at the Ferry road falls of the Schuylkill. The drives were roped off. Yesterday morning the waters receded to leave the roads covered with ice and refuse.

The high waters forced mills to close at Manayunk on Saturday afternoon and also compelled a shutdown of the big hydro-electric plant supplying power to the P. R. T. Cellars were flooded, both along the river and those bordering Darby and Wissahickon creeks, which were also running madly. Residents of Merion were among those with flooded cellars. Four motorboats were torn from their moorings and smashed at the Flat Rock dam.

Heavy timbers floating down the Flat Rock dam were



Riverton, N. J., has become the Miss Ray Newkirk, Whitney Frishmuth spell has given a greater opportunity

been torn from the new bridge at Conshohocken. The pieces were of great bulk and apparently parts of bridge work

While hardy adventurers drove madly about on iceboats at Riverton and the upper Delaware, iceboats battled to keep the channel and the ways of ferries clear below. The strong wind made iceboating dangerous yesterday and skating almost impossible. The craft sped along at frequent speeds of easily 100 miles an hour

Will Keep Delaware Open

John S. W. Holton, president of the Philadelphia Maritime Exchange, declared the ice conditions of the Delaware to be serious, but he is optimistic, declaring that the stream will be kept open to the ocean, even if the navy sends battleships to do it. The Delaware is not so formidable now as in 1898, Secretary George F. Sproule, of the commission of navigation, said. He is sure the great number of steamers plying in the present war trade will keep the channel open.

"When a thaw of proportion comes," he said, "the iceboats will attack the heavy ice fields upstream, as is their custom, and gradually break away the ice so that it will float to the ocean slowly thru a cleared stream."

Charles Durborow, the bank cashier at Riverton, who takes a daily plunge in the river, found the ice too thick to break thru for the first time in years yesterday. "Sonny" Wright and Ralston Biddle, two Riverton boys, sailed an iceboat from Riverton to Torresdale in the afternoon. From six to ten craft could be seen skimming over the ice in that section.

The body of Mrs. Jennie Dillmore, of Nineteenth street and Erwig avenue, was found yesterday morning hanging over a wire fence about the home of her neighbor, Francis H. Peppelman, of Nineteenth street and Laycock avenue. She had been in the city visiting her son Charles, of 213 Fitzwater street, and it is thought she lost her way and perished in the cold. She left her son in the best of

care.

From

The North American,
Jan. 14, 1918

Excellent for sore throat, bronchitis, croup, stiff neck, asthma, neuralgia, congestion, pleurisy, rheumatism, lumbago, all pains and aches of the back or joints, sprains, sore muscles, bruises, chilblains, frosted feet, colds of the chest (it often prevents pneumonia).

30c and 60c jars; hospital size \$2.50.



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HISTORICAL ASSOCIATION

Port Clinton, Pa., 1954

Norristown Daily Times
It will be well, indeed, for Norristown to have representation at the meeting of the Schuylkill Canal Improvement Association, which is to be held, tomorrow, in the Hotel Berkshire, Reading. For a long time there has been an effort to revive interest in the old waterway, with the idea, of course, of making the same navigable again. Years ago the Schuylkill Canal carried a great deal of traffic from the central or near-central section of the state to tidewater at Philadelphia, and the worth to the general welfare was quite appreciable. With the impetus of the several towns (as municipalities) along its banks and the added push that will come from the interest of manufacturers and the endeavor to align it with the larger movement looking to federal waterway plans, something tangible might actually come of the matter.

TO RESTORE SCHUYLKILL CANAL

The Telegram has, on a number of occasions, urged that Reading should take some steps toward inducing the government to restore the Schuylkill canal to navigable service. Nothing in that direction has been done here, but the matter has been taken hold of in Schuylkill county in a way that means business.

On December 8 a convention will be held at the Hotel Washington, at Washington, D. C., under the auspices of the Inland Waterways Commission, at which the subject will be brought forward. Schuylkill county will send delegates to that convention primed with facts and figures to show the importance of the canal as an inland waterway, and they propose pushing the scheme with a determination to win out.

Reading is now invited, through The Telegram, to participate in the convention, and to send delegates representing the city and its commercial bodies to co-operate with the Schuylkill delegates.

The matter is one of more than ordinary importance to the people and the industries of Reading. There was a time when vast quantities of coal were shipped by the canal to tidewater, and a large part of Reading's supply came that way. The transportation charges were low and remained so until the railroad company secured control of the canal and gradually eliminated it as competitive carrier. Since then transportation rates have been whatever the railroad company saw fit to make them, and the canal has become practically non-existent. The purpose now is to restore this waterway to its former usefulness, and it can be done if the federal authorities can be convinced of its practicability.

Reading should do its share in the matter, and the first step is to have the city properly represented at the coming convention. The Chamber of Commerce, which is an organization representing the industrial and commercial interests of Reading, should have one or more of its members in the convention, and it would not be out of place for the city to be officially represented there.

Now is the time to act. *Rdg. Telegram - 11/29/19*

\$35,000,000 URGED IN NEW WATER PLAN

Necessary for Immediate Improvements, Experts Report to Mayor

Public Ledger 1/22/20
WOULD EXTEND METERS USE

To Meet Requirements Fifty Years Hence Would Cost

\$134,900,000

Improvements to the water works system of the city necessary to meet immediate requirements would entail an estimated expenditure of \$35,000,000. Development of the water supply to an extent adequate to needs fifty years hence would involve an outlay fixed at \$134,900,000.

Those are the conclusions of the commission of four engineers appointed by Mayor Moore last July to study the water problem of the city, which are contained in its preliminary report to the Mayor. The report was transmitted by the Mayor yesterday to Council, which referred it to the committee on public works. The report was signed by all four members of the commission, J. W. Ledoux, chairman; George W. Fuller, Joseph F. Hasskarl and J. Waldo Smith.

Commission's Recommendations

The general conclusions and recommendations of the commission covering both present and future necessities are:

Continuance for a time of the existing sources of supply at local points on the Delaware and Schuylkill rivers.

Extensive improvements and additions to the present works at once in order to insure an ample quantity of water at a reasonable pressure and of satisfactory quality throughout the entire city.

The extension of the meter system as rapidly as feasible to curtail waste, conserve supply and capacity, reduce investment and operating costs and divide water rates more equitably.

The construction of reservoirs on the watershed of Perkiomen creek to supplement the supply drawn from the Schuylkill particularly during the dry weather flow of the river.

Abandonment of the Schuylkill subsequently upon the construction of labor. It is therefore pointed out that storage reservoirs on watersheds of Perkiomen and Tohickon creeks, from which water should be brought to the existing Schuylkill river plants, as improved and extended.

Construction of storage reservoirs on the Neshaminy creek, into which water from the Delaware above Trenton should be pumped, and from which the water would flow by gravity to the Torresdale filters, as improved and extended. That step is to follow any increase of the pollution of the Delaware at Torresdale that will render the water at that point undesirable for use.

Relinquishment of consideration at present of a water supply from distant sources, such as the tributaries of the Lehigh river, and the upper Delaware near Water Gap, or the Susquehanna river above the Maryland state line, because of prohibitive cost.

The filing with the State Water Commission of a caveat of intention to develop reservoirs outside of Philadelphia in order to avoid the necessity of purchasing property far in advance of actual construction.

Regarding ground water or artesian well sources in South Philadelphia, to the possibility of which the Mayor particularly directed the attention of the engineers in delivering his instructions to them last July, the commission states in its report that water from those sources has thus far appeared to be of small quantity and highly impregnated with mineral matter, which makes it unsuitable for domestic or industrial purposes. The report adds, however:

"Contracts for test wells are about to be let and final conclusions and recommendations need not be made until additional information and data have thus been obtained. Should adequate and satisfactory water bearing strata be found in the lower part of the city, a supply could be developed as a separate unit which could be readily connected with the distribution system when and as desired."

Program for Expenditures

The opinion is expressed in the report that the improvements and extensions deemed necessary for present requirements should be made in the next five or six years. A program for the expenditure of the \$35,000,000 estimated as required for those improvements and extensions is recommended as follows:

For the construction of the first impounding reservoir on the Perkiomen creek, with necessary development of program for stored water supply, \$8,000,000.

For improvements in and extensions to the Delaware river supply works, \$6,000,000.

For improvements in and extensions to the Schuylkill river supply works, \$4,000,000.

For extension of distribution mains and construction of distributing reservoir for the northeast portion of the city, \$8,000,000.

For extensions and betterments to existing distribution reservoirs and main pipe lines, \$5,000,000.

For general improvements essential for safe maintenance of the plant, \$4,000,000.

The report urges that the city promptly begin the executions of those projects.

The estimate of \$134,900,000 for the completion of a water-supply system to meet requirements fifty years hence is based on present costs of materials and labor. It is therefore pointed out that so great a sum may not be necessary. The amount is apportioned as follows:

works, \$56,073,000; construction of aqueducts to carry water to the city, \$50,819,000; changes in filtration plants and pipe distribution system, \$28,000,000.

The recommendations for developing

WAGE GAIN IN 3 LINES EXCEEDS PRICE JUMP

Iron, Steel and Woolen Workers

N.H.M. Get Big Pay

Increases *8/28/17*

SHOWN BY U. S. REPORT

WASHINGTON, Aug. 27.—Iron, steel and woolen manufacturing workers' earnings per capita for the two and a half year period just ended increased more than the advance in the retail prices of foodstuffs for the three-year period July, 1914, to July, 1917.

A statement by the department of labor today shows that iron and steel workers' per capita earnings increased 53 per cent and woolen manufacturing workers 45 per cent, while the cost of foodstuffs increased 41 per cent.

Workers in other industries did not fare so well. Per capita earnings of boot and shoe workers increased 31 per cent; cotton manufacturing employees, and cotton finishing workers 38 per cent; hosiery and underwear workers 37 per cent, and silk workers 25 per cent.

Workers in the iron and steel industry in the two and a half year period increased 75 per cent in number and the payrolls increased 187 per cent; in the boot and shoe industry workers increased 17 per cent and payrolls 63 per cent; cotton manufacturing decreased 1 per cent and payrolls increased 37 per cent; cotton finishing workers increased 11 per cent and payrolls increased 58 per cent; woolen manufacturing workers increased 19 per cent and payrolls 73 per cent; hosiery and underwear workers increased 21 per cent and payrolls 66 per cent; silk workers increased 2 per cent and payrolls 28 per cent.

Norristown Times
TUE. MORNING
FEB 26 '18
ORIGIN MEMBER OF THE NATIONAL NEWS SERVICE

FIFTY FEET MORE OF DAM GIVE WAY

This Fact, With Storm-Raised River, Affects Town's Water Supply

OFFICIALS ARE EXERCISED
Consequences Not Determinable Yet; Great Plunging at Barrier

Nearly fifty feet more of the Swede street dam was swept away, yesterday afternoon, and this, together with the high water that arrived during the night, has affected conditions regarding the borough's water supply.

It will be remembered that over a month ago a large portion of the dam, near the Bridgeport side, was swept away, and although workmen have been attempting to make repairs they have been unsuccessful, because of the general conditions of the river. Yesterday afternoon a break started about where the first had stopped and continued in the direction of the Norristown side.

Officials of the Norristown Water Company were considerably exercised over the condition, last evening, and lines were immediately erected for the purpose of making preparations to complete soundings of the stream near the big intakes of the supply mains. This would have been done this morning, but the heavy rains of the night caused a rise in the river of about three feet and new lines will now have to be erected. The borough's water supply is pumped from the river, near the Bridgeport side, through two mains, one a 16-inch and the other a 24-inch.

Superintendent Robert Jackson of the water company, said, this morning, that water was still being pumped into the reservoir, and that the work would continue just as long as was possible. He was unable to say at that time whether the new break would cause a decrease in the supply but ventured the statement that care would have to be used for several days until the full extent of consequences could be determined.

Many spectators visited the dam this morning, but they could see little of the break on this side of the river. The high water is plunging over the breast on the Norristown side in great volume, while on the Bridgeport side the lengthy break allows the water to pour down stream with such velocity, that it will be impossible to do anything toward repairs for several days at least.

The river had raised considerably by 2 o'clock this afternoon, and it was announced by rivermen, that the water was at that time within fifteen inches of the height it reached last week, when the ice was swept away.

It is still rising was the report received at that time, and the indications were that before nightfall the river would be more than ten feet above normal.

The managers at the Woodstock Mills, which will be the first to suffer any damage because of the high water are this afternoon taking every precaution to prevent damage to the plant and machinery. Other establishments along the river front realizing that there is a big freshet are taking similar action.

This afternoon the water was rushing over the Swede street dam on the Norristown side with such velocity that the breast was not noticeable. Many persons were attracted to the river front.

PROGRAM FOR CANAL BOOMERS

CONVENTION IN READING

WEDNESDAY JAN. 21

Rdg. Eagle 1/19/20

The program for the Schuylkill Canal Improvement Association convention at the Hotel Berkshire on Wednesday, Jan. 21, has been completed. There will be morning and afternoon sessions and a dinner at 6. Plans for enlisting state and federal aid in the project are to be considered. The program follows:

MORNING SESSION.

10 A. M.—Opening session. Registration of delegates and extending acquaintances to one another.

10:30 A. M.—Meeting called to order by J. H. Zerby, of Pottsville, president of the association, and introductory remarks, presenting to the convention the respective officers of the association.

10:35 A. M.—Prayer by Rev. (Name to be announced later).

10:40 A. M.—Announcement of guests at the convention and reading roll of all delegates present.

10:45 A. M.—Address by President Zerby, detailing purpose of the association.

11 A. M.—Address, "Welcome to Reading," by Mayor John K. Stauffer.

11:15 A. M.—Address, "History of the Schuylkill Canal," by J. W. H. Glass, first vice president and chairman of executive board.

11:30 A. M.—Greetings by E. A. Barkley, of Phoenixville, second vice president.

11:45 A. M.—Address, "Co-operation With Other Sections of Pennsylvania to Hasten Legislative Action," by Burd S. Patterson, secretary of Lake Erie and Ohio River Canal board, of Pennsylvania.

12:15 P. M.—Suggestions of delegates for general policy to be pursued by association.

12:30 P. M.—Appointment of committees to meet during luncheon recess.

12:45 P. M.—Luncheon.

AFTERNOON PROGRAM.

3 P. M.—Business meeting. "Welcome," by local business and civic organizations; reports of committees; address by James H. Craig, deputy secretary of internal affairs of Pennsylvania; address, by George M. Lehman, engineer, Department of Internal Affairs of Pennsylvania; address, by city solicitor of Pottsville; nomination and election of officers; adoption of program for work of the association to advance the project; automobile tour of the city.

6 P. M.—Dinner. (Toastmaster to be announced later). Open forum. "How Improvement of Shipping Facilities for Heavy Tonnage by Canal Will Benefit All Business Interests in Cities and Towns of Schuylkill Valley, by Relieving Traffic Congestion and Helping Reduce Costs of Living."

The officers of the association are: J. H. Zerby, Pottsville, president; J. W. H. Glass, Reading, first vice president; E. A. Barkley, Phoenixville, second vice president; W. L. Binder, Pottstown, secretary; D. Elmer Dampman, Reading, treasurer of convention.

State Senator T. L. Eyre spoke briefly, and promised every assistance he could give, called on. He thought the opening of the canal would help reduce the cost of living, and assured the Association that nothing worth obtaining was ever won without fighting for it, every inch of the way.

John B. Dengler spoke briefly, and the next speaker introduced was Jas. C. Craig, Deputy Secretary of Internal Affairs, who continued and emphasized the remarks of those who preceded him, and promised whatever aid his Department might be able to give.

Prof. Lehman, of the Department of Internal Affairs showed a blueprint of the canal from Port Carbon to Fairmount Dam, Philadelphia and explained the different levels, lock systems, and so on.

Gilbert Fox, Esq., of Norristown, advised a getting down to hard work at once and advised that the solicitors in the different towns get together and map out a plan of legal procedure.

Joseph Fitzwater a 90 year old visitor from Port Providence, was called on and gave a number of interesting reminiscences, speaking in a serio-comic vein of some of his experiences, from the time when, as a boy, he pulled up the stakes which the Reading Railway Co. used to mark its proposed line through the meadow of his father's farm and used them to club chestnut trees, until he tried some of the river washings as fertilizer on his farm, with the result that crops in that particular section were rather poor that year, the "fertilizer," instead of being the rich black mud of former years, proving to be culm from the mines, having no value at all and proving, rather, to be a detriment.

Planned by WILLIAM FENN

Mr. Glass. I am here in behalf of the Schuylkill Canal Improvement Association to further the bill presented by Congressman Watson. We are deeply interested in the Schuylkill canal for many reasons. In the first place the Schuylkill canal, we know, is the first completed waterway project in the country and had been contemplated by the far-sighted William Penn over 130 years before it was completed. We feel that the Schuylkill canal would be of great importance to the government in time of war as well as in time of peace. We feel that if the canal was modernized we could transport coal by means of it from the heart of the coal regions to tidewater, in Philadelphia. So we feel that its importance there should interest the government. In peace times we all realize that coal is the most essential commodity in the furtherance of industry and also in aiding toward reducing the high cost of living.

Mr. Layton. For the information of the committee will you allow me to ask you to put into the record of the hearing just exactly where this canal runs and the length of it?

Mr. Glass. The Schuylkill canal once ran from Pottsville to tidewater. It has been running from Port Clinton, and there is a possibility of extending it into Pottsville, which takes it right into the coal regions and connecting with tidewater. The Schuylkill canal empties into the Schuylkill River at Manayunk, and below the dams, of course, the stream is navigable.

As I said it is important during peace times. We could transport this coal and aid our industries. We have had the experience in the past that some of the industries in the valley, and particularly in Reading, the city that I come from, had to close down for want of coal. With this canal a condition of that kind would be eliminated.

Mr. Lea. What would be the length of that canal?

Mr. Glass. The distance is approximately 100 to 108 miles.

7,000,000-Ton Capacity.

Mr. Lea. What size canal do you want?

Mr. Glass. The size of the canal, to modernize it, should be approximately 70 to 75 feet wide. We feel that a modern canal could be made, and if the locks were 20 feet wide the capacity of the locks would then be a little less than 500 tons. With an 80-foot width surface during the canal season we could transport coal, approximately 3,600,000 tons, with single locks and double that amount, or over 7,000,000 tons, with double locks.

That we feel, would be a fair volume of coal to be transported on the small expense that would be necessary to modernize the canal; on these grounds, feeling that it would be of great importance, as I have said before, in case of emergency and in peace times, we ask your committee to consider the merits of the Watson bill and extend a survey. I might mention that a survey has been made by Engineer George M. Lehman, Department of Internal Affairs, at the request of the government, and I understand that report was favorable.

The last scheduled speaker of the afternoon, was former District Attorney Truman D. Wade, who began by telling how he played marbles on the canal tow path at his home town when a boy, and saw watermelons taken up the canal and coal brought down. He suggested a legal staff to take up questions of procedure and also urged a direct appeal to the Public Service Commission. You may talk and you will gain nothing, but go direct to the Commission and get results.

Brief talks were given by William S. Ellis tax collector of this place; Councilman Richard F. Bate of Conshohocken, and President Zerby, the latter complimenting Messrs. E. A. Barkley and M. J. C. Smoyer on the excellent program prepared. On motion of Mr. Glass, a vote of thanks was extended the Borough of Phoenixville, and the session adjourned.

The evening meeting was given up to an informal talk on different subjects ranging from the canal to daylight saving.

Out-of-town men, who registered and whose names do not appear in the above report were James B. Ray, burgess of Conshohocken; Frank Quigg, of Port Kennedy; John B. Dengler, a member of Council in Pottsville; H. R. Black of the Business Men's Association, Royersford, and Charles Connard, of Port Providence.

THE SCHUYLKILL CANAL HEARING

(See below)

I have come here, having previously come here to a convention, on my own time and at my own expense. So we are merely arguing from the point of civic pride and for the good of the community.

Mr. Dempsey. I don't think the committee is clear as to whether the federal government has any jurisdiction over the pollution of that stream or not. It has jurisdiction, as I understand it, over the boundary streams and probably over navigable waters that are in the state. Possibly it has over this river.

Mr. Glass. Well, as that question has been brought up, they have merely a lease. This was chartered to the Schuylkill Navigation Co. on March 8, 1815. The state of Pennsylvania, in its initial waterway operations, issued a charter to the Schuylkill Navigation Co., and it operated up until 1870 and was a profitable affair, as is shown by the fact that the shares, which originally sold at \$50, increased to \$175 and \$180 in 20 years of operation. At that time it was a competitive line to the railroad company and for that reason it was taken over. Now the railroad company is not living up to the terms of the lease.

LEASE NOT OBSERVED.

Mr. Dempsey. In what respect?

Mr. Glass. For instance, Phoenixville has contracted with the Reading Railway Co. for a certain volume of coal to be transported from the mines over the canal for the purpose of furnishing their necessities in the city. They had transported part of that contract amount and before the contract was completed they were notified that the canal was abandoned and necessarily they had to get the balance of the coal over the rails, which would mean extra expense and inconvenience to the city of Phoenixville. Now, we have an official communication showing that they are abandoning the canal and the terms of the lease were that they should continue operation of the canal; and furthermore by permitting this culm to get into the canal, which is against the terms of the lease, and creating a menace to health, I feel that it is a further instance of the violation of the terms of the lease.

Mr. Layton. Why did you not proceed to cancel it?

Mr. Glass. The reason is this: That people that I have spoken to

NO SALARIED JOBS.

Mr. Glass. At the present time our position is that if the canal could be utilized so that it could transport coal, iron ore, and heavier tonnage, the railroads would be in a position to transport the other commodities that will sustain life, such as food, clothing, etc., and it would help to relieve the congestion. The Schuylkill Canal Improvement Association, as a word of explanation, has been formed by men who are actuated by motives of civic pride. There is no remuneration of any kind in connection with it, no salary; all the officials are volunteers; the members have volunteered their time, and I might add that I

individually felt that it was a tax and expense to appear before the public service commission of Pennsylvania, and I don't think there was any individual who felt inclined to spend the time and the money.

In other words, probably they were not public spirited enough to go to that expense. The association was formed for that purpose, to protect the rights of the communities and of the citizens, and we felt that with an organization of this kind we could enlist the services of public-spirited men, and in a recent convention held at Phoenixville we decided and are now endeavoring to get the city solicitors from Reading to Philadelphia, including Pottsville and Philadelphia, to co-operate with our association, and several have already consented to do so.

STATE MIGHT HELP.

Mr. Cleary. Suppose this was done, how could you compel the coal companies, which are the railroads, to ship coal over the canal? They own the coal and they own the roads.

Mr. Glass. If we could not compel the railroad companies to transport the coal, if they live up to the terms of their charter to keep it open, I think the state would enlist aid to have the coal transported, because we feel that it is a necessity. From an economic standpoint I think it has its merits also.

CANAL WATER UNWHOLEOME.

Mr. Glass. If you will permit me to add a few remarks, the city of Philadelphia, I am informed, contemplates getting 100,000,000 gallons of water from the Schuylkill River. The Schuylkill canal empties into the Schuylkill River. At the present time a good many of the municipalities and communities along the Schuylkill valley are getting their drinking water from the Schuylkill canal. In the present state it is a menace to health. The culm going into the canal from the mines makes it a menace to health, and recently in Philadelphia, three or four think four states had a waterways convention. A councilman from Reading, Mr. Dampman, who has charge of the water department in Reading, attended the convention and brought back the report to me that Philadelphia was going to appropriate \$15,000,000 for its water supply, and contemplated getting 100,000,000 gallons of water from the Schuylkill.

Furthermore, the purpose of the Schuylkill Canal Improvement Association is not to fight the railroad companies. It is not to stifle competition or to offer any opposition to them. We feel at the present time transportation being of vital importance to the entire country that the canal would be of great aid. In other words, we are willing to aid the railroad companies in their transportation problems.

Mr. Dempsey. Your position is that there is congestion and that there will be plenty of business for both the railroads and the canals.

5/16/20

READING MAN ARGUES FOR RESTORED WATERWAY

9549

A Reading man was the central figure at one of the numerous congressional committee hearings and inquiries that always make up part of the Congress year at Washington, when J. H. W. Glass, vice president and executive board chairman of the Schuylkill Canal Improvement Association, was heard. His subject was advocacy of a bill providing for a survey of the canal from Pottsville to Philadelphia via Reading, with a view to the eventual rebuilding of the canal, widening of the waterway and the use of boats of larger capacity.

Advance proofs of the Congressional Record with the statements by Mr. Glass and the text of the questions put to him, have been received here. The Reading man expects to take up the canal question with state officials at Harrisburg, either as an assemblyman or as a private individual. Mr. Glass is one of the Republican aspirants to place in the House at Harrisburg, but he says he will go to Harrisburg to boost the canal regardless of the results at the polls.

Part of the Congressional Record of the canal hearing is reproduced below:

a.

DATE. No. of.

C.

Schuylkill Fouled for Entire Length by 750,000 Tons Discharged Annually Into River

Inquirer 1/5/19

Commission Suggested to Advise Legislation Cure Evil by Economic Engineering Methods

Once a week a fresh red, white and blue flag is flung to the coal-blackened breeze from the top of the Bell Telephone Building in Philadelphia. At the end of each week of exposure the red, white and blue colors are turned a uniform black, and a fresh flag is run aloft to undergo, in a few days, the same merging into blackness.

The pollution of the air in Philadelphia has an accompanying pollution of the rivers of the State with the outpourings from the anthracite mines and coal breakers. The waters of the Schuylkill, the Susquehanna and the Lehigh, which men ~~not yet old~~ remember as running sweet and clear, fit to drink from and bathe in, are now as black and foul as the week-old flag on top of the Bell Telephone Building. This is true of the Schuylkill for practically its entire length. The islands and banks, once covered with vegetation, have now the appearance of low-lying calm banks. The black deposits increase yearly in extent and from the bed of the stream new islands, with a basis of coal mine wastage, are steadily extending.

Formerly, perhaps, no great harm was done by the outpouring of the mine waters into the rivers. The region formerly affected was confined in the main to the mining country itself, which often was not an agricultural country. The volume of mine and coal breaker outpourings was not great enough to affect seriously the water supply of the distant cities. The practice was once of natural development, though even for that now distant period it was lacking in forethought and thrift. It was the method of disposal most easily arrived at, and custom gave it authorization. Its origin belonged to the time of the reckless destruction of the forests, of the fowls of the air, of the game in the woods and of the fishes in the waters.

All these destructive processes have been wisely checked, at first in spite of some opposition, but now with the approval of every intelligent person except in the anthracite regions, where the wastage of water and coal still continues.

They left the camp this morning and started to row down the river. When they approached the dam, they were caught in the swiftly-moving current and the boat carried over the comb.

Just as the boat started to go over the dam, Shubin shouted to his companion to jump into the water. This Brown refrained from doing. Shubin jumped and has not been seen since. Both were in bathing suits.

Brown sat in the boat and was carried over the dam. As the boat struck the rocks it broke in two. Brown managed to swim to the west shore of the river where several men who had witnessed the affair aided him to climb the bank.

The Montgomery county authorities and the Manayunk police, who are cooperating in the case, hold out little hope that the missing man is alive.

It was explained that the water is too high in the river to permit to drag for the body.

The water pouring over Flat Rock Dam is five feet deep. This is four feet above normal, a condition caused by the continued rains of the past eleven days.

Chief Engineer Culp, at the Shawmont pumping station, saw the boat approaching the dam and called a warning to the two occupants who were evidently not acquainted with the river. According to Brown neither he nor his companion heard this warning. It is considered probably that the cries from the pumping station was not heard because of the roar of the water rushing over the dam.

The body of an unidentified man was recovered from the Schuylkill river at Forty-ninth street today. The man was 5 feet 8 inches tall, and weighed about 150 pounds. A timecard was found in the pocket of his clothes, bearing the name of Tony Millet. The card was made out by a Pittsburgh concern, Braun & Knox. The boy was removed to the Morgue.

1.

b.

c.

RUCTIONS AT

In recent times, mechanical and chemical methods have been perfected, economical in installation and operation, by which it is entirely practical to effect a great saving in coal and water, and to prevent any longer the pollution of the rivers of Pennsylvania, suffered for so many years in the anthracite regions. The saving in coal becomes of increased importance yearly. This was never so apparent as at the present time. In the face of the obvious need for economy, nearly 4,000,000 tons of fine granular coal, which by proper methods could be saved for domestic uses, are carried each year into the rivers. With the present high prices of coal it has become a pressing question whether the anthracite supply should not be saved entirely for domestic uses. In the Eastern part of the country nearly all domestic heating plants are constructed for the use of anthracite and are unfitted for the consumption of bituminous coal. At present thirty per cent. of the anthracite production is used for steam fuel. This thirty per cent., composed of the small sizes of coal, can be briquetted for domestic fuel, and the fine coal now wasted, if recovered and briquetted, would cause an increase of at least eight per cent. in the tonnage available for domestic consumption.

The river pollution is entirely confined to the river systems of the Susquehanna, Schuylkill and Lehigh. About 85 per cent. of the total pollution occurs on the Susquehanna River system; the Schuylkill comes next with 10 per cent., the Lehigh having only 5 per cent. The main tributaries of the Susquehanna, so far as pollution is concerned, are the Lackawanna, with pollution covering an extent of 30 miles; then the Susquehanna itself, from Pittston to Shickshinny, an extent of about 22 miles; Nescopeck Creek at its headwaters, amounting to about 8 miles; Shamokin Creek at its headwaters for 15 miles, and the Mahon Creek for 20 miles.

The pollution of the Schuylkill occurs at its headwaters, where it breaks up into a number of small creeks, which are polluted for a distance of approximately 40 miles, measuring along these various creeks.

The pollution of the Lehigh River occurs at the headwaters of a number of its small branches rising in the territory in the vicinity of Hazleton.

The pollution of the Lackawanna River is serious, as it passes through a thickly settled valley which contains many industries in addition to anthracite production. The same is true, to a lesser extent, of the Shamokin Creek, while the Nescopeck and Mahon Creeks pass through a region which is mainly devoted to the anthracite industry, although the waste they carry may have some comparatively slight effect on farm lands.

So far as pollution of the Susquehanna River itself is concerned, the large volume of water coming down from New York State very much dilutes the pollution, which does not interfere seriously with the quality of the water for industrial purposes. The volume of clean water also destroys very largely any bad effects on vegetation due to acid mine waters.

The large quantity of solids delivered to the Susquehanna from the coal mines, together with the natural washings from the Susquehanna watershed, works serious injury from the fact that they are deposited along the lower regions of the Susquehanna on any low-lying lands that may be over-flowed. In one way the coal solids delivered to the Susquehanna are a benefit to a limited class of people along the middle and lower Susquehanna River, in that a fairly profitable business has grown up in the recovery of the coarser coal from the river in the vicinity of Harrisburg, which gives that vicinity several hundred thousand tons a year of comparatively cheap steam fuel. But this recovery of waste is economically unsound.

The pollution of these rivers comes from two causes, acid mine waters and solids carried by the waste water of breakers and washed down from culm piles. According to the report of the mine inspectors of Pennsylvania for the year 1916, there was pumped from anthracite mines something like 600,000 gallons per minute of mine waters. Much of this water is of fairly good quality and could not be considered as causing pollution. Considerable of it, however, carries free sulphuric acid and sulphate of iron and aluminum, which are acid in their effect and are destructive of vegetation. It is proba-

bly true, however, that within fifteen or twenty miles from the point of pollution the effect of such acid has been completely destroyed owing to natural chemical reaction. The solids carried into the river systems with the waste waters from breakers are the most serious form of pollution. During the average working day of eight hours, and for approximately 250 days per year, there have been something like 300,000 gallons of these waste waters from the breakers discharged into the river systems. The solid content amounts to from 5 to 10 per cent., which means a total of between six and seven million tons of solids per annum, or something like ten million cubic yards of solid material.

Attempts are usually made to store as much of the solids as possible on the surface, but in many cases the breaker waters are discharged directly into the streams, and even where retention of the solids is attempted the actual retention is not by any means complete. It is probable that the solid material washed by rains from culm already deposited counter-balance any material which may be retained by such impounding attempts. Until recently the material which has been discharged from the breakers has been considered absolutely worthless because of its comparatively small size and the presence of large amounts of fine clay. The greater portion of these solids are smaller than barley, the smallest commercial coal size made, but it is probable that there is a loss of nearly 500,000 tons a year of barley size and larger.

The serious fuel shortage occasioned during the past two or three years has stimulated interest in this waste material and has resulted in the development of a number of crude plants to recover the coarser portion of the coal found in these river systems. During the past year the recovery has amounted to several hundred thousand tons. Such recovery, however, has not amounted to more than 10 per cent. of the recovery that is possible.

POLLUTION KILLING FRESH WATER FISH

Angling Made Impossible in Schuylkill and Delaware Rivers by Industrial Plants

MAY INCREASE PENALTY



ANY fishermen in every State in the Union are wondering how much longer it will be before the progress of science and industry will kill off all the fish in our great rivers by pollution.

Reports from all over the country state that the conditions of rivers is daily becoming worse. Manufacturing wastes, oil and culm deposits are all playing their part in driving the fish away from the streams.

Reports state that it would be useless to preserve New York Harbor as a fishing ground, as the fish there are already killed, but matters take on a different aspect in the Chesapeake Bay, where the fishing industry is flourishing.

Property of
HISTORICAL ASSOCIATION
Port Clinton, Pa., 1954

Henry W. Stewagon, a prominent member of the Pennsylvania State Fish and Game Preserve Association, says the Schuylkill is beyond redemption as a home for fish.

"There are some people in Philadelphia," he asserts, "who can still remember when the river was populated by bass, shad and catfish. There are only probably a dozen bass caught there in a year now."

The pollution of the Schuylkill began with the operation of the coal mines, when the sulphuric acid of the mines was flowed into the river in vast quantities. It destroyed all fish life from there to the vicinity of Reading. Below the Fairmount dam, Philadelphia first not only ran all the sewage from West Philadelphia into the river, and from part of the city east, but the gas tar refuse from the old gas works as well.

Live fish placed in bags and hauled from Spring Garden st. bridge to the dam would be dead within a few hundred yards.

The Delaware has become so bad that the shad fisheries at Gloucester are out of business. The numerous manufacturing plants at Trenton pour all their refuse into the river.

A Government report of a few months ago stated that the lower Schuylkill is the worst oil-polluted river on the Atlantic seaboard. The tons of grease and oils, various chemicals, acids and other poisonous substances that are discharged into it annually from the city sewers have destroyed untold thousands of fish fry, as well as the minute creatures upon which they subsist. Vegetation provided by nature for these also suffers.

The Federal Department of Fisheries has made some effort to stop the pollution by industries, but the act under which it operates, though stringent and well expressed, leaves loopholes by which the hands of the Department are tied. In many cases the penalty for dumping refuse is so small for one offense that the average manufacturer can pay it easily.

An effort is to be made at the present session of the State legislature to strengthen the fisheries act, forbidding industrial pollution, to raise the penalty from \$100 to \$1,000, and to increase the penalty for each successive offense.

d.

The solid material discharged into the Susquehanna River systems annually is estimated to amount to 5,800,000 tons or about 8,000,000 cubic yards. The Schuylkill receives approximately 750,000 tons or over 1,000,000 cubic yards annually, while the Lehigh River system receives annually approximately 300,000 tons or nearly 500,000 cubic yards.

The following table presents carefully made estimates of the amount of coal wasted each year in the breaker water now flowing into the river systems draining the entire anthracite region. The variation between breakers is very large, but an average relation between tonnage and wastage has been established with care and applied throughout. While tests at different collieries might show variations from the company totals as presented below, the total is closely indicative of the situation.

Number of collieries operating in the anthracite region and an estimate of the annual amount of material wasted with the breaker water:

Company	No. of Breakers	Gross tons Valuable Material	Gross tons Tonnage of Material
Phil. & Reading Coal & Iron Co.	39	585,000	468,000
Delaware, Lackawanna & Western R. R. Co.	27	386,000	388,000
Lehigh Valley Coal Co.	31	445,000	356,000
Penna. Coal Co. & Hillside Coal & Iron Co.	15	336,000	289,000
Delaware & Hudson Coal Co.	23	400,000	321,000
Lehigh & Wilkes-Barre Coal Co.	14	234,000	188,000
Lehigh Coal & Navigation Co.	10	228,000	188,000
Scranton Coal Company	11	116,000	93,000
Independent Coal Companies	124	1,022,000	866,000
DISTRIBUTION OF THE ABOVE AS TO RIVER SYSTEM	300	3,812,000	3,132,000
Susquehanna River System	260	3,221,000	2,638,000
Schuylkill River System	87	426,000	342,000
Lehigh River System	12	165,000	182,000
	309	3,812,000	3,132,000

The towns and cities drawing their water supply from the rivers thus polluted have an important economic interest in the conditions described. As is well known, Philadelphia maintains an expensive filtration plant for the treatment of the Schuylkill supply, and the fouler the substance the more expensive is the filtrative operating cost. While the percentage of total solids emptied from the breakers into the Schuylkill is slight as compared with the amount emptied into the Susquehanna, the effect upon the waters of the smaller river is much more noticeable.

The pollution begins at the sources of the Schuylkill. There is no abundant clean water supply coming further from the north to neutralize the Schuylkill pollution, as is the case with the Susquehanna. In the Schuylkill the solids lodge in the numerous dams until swept onward by the periodic freshets, which process has now extended the pollution of the Schuylkill throughout practically its entire length. Before looking elsewhere for another water supply it would seem to be the part of wisdom in Philadelphia to see if all the interests concerned, mining companies, independent operators, the other towns along the river and the State authorities cannot arrive at a method indicated by forethought and thrift by which the present wastage of water and coal at the mines and the pollution of the Myers may be stopped.

f.

So far as the fine coal now lost is concerned, the briquettes produced therefrom could be sold at the price of pea coal, at a profit of 50 cents per ton to the coal companies, or whoever should operate the briquetting plants. The approximate investment cost of plants to convert this four million tons of fine coal into briquettes is ten million dollars.

The second stage in the prevention of pollution is to take the waste waters from the fine coal recovery plant, which carries material of the fineness of flour, and consisting largely of fire clay, and discharge them to mechanically operated settling tanks. These settling tanks will deliver two products, practically clear water which can be re-used for washing coal if so desirable discharged into the streams without causing pollution, and a thick sludge containing 90 per cent. of the solids which can be conveniently stored on the surface in such a way that pollution of the streams because of the washing of the waters would be cut to a minimum.

The investment cost to treat these waters and prevent pollution would amount to approximately three million dollars, for the entire anthracite region. The annual operating cost would amount to about \$400,000.

In many cases the coal companies could write off this operating cost because of the saving in pumping costs occasioned by their present water supply. In many cases they are now pumping clear water against considerable heads and from fairly long distances, which is an expensive operation.

That this clarification of the waste waters from the coal recovery plants is possible and practical is demonstrated by the fact that several of the large copper companies operating in the Rocky Mountain region are carrying on exactly the same operations. One of the largest of these companies is treating between five and six million gallons per twenty-four hours of mill tailings, which contains from three to four thousand tons of solids per day. Their object in treating these mill tailings is to put the solids in a condition where they can be piled on the surface, thus preventing pollution of the streams.

The facts and conditions herewith conservatively stated are presented in the belief that it is important and possible for the Commonwealth and the mine operators, by intelligent consideration of the subject, and animated by a desire to safeguard both the water and the anthracite coal supply, both for the present and the future, to adopt the conservation method already indicated, a method whose economy and practicality have been demonstrated in other parts of the country in mining operations.

e.

It would be perhaps arbitrary for the Legislature and State authorities to serve notice on the coal companies that the pollution long practised must summarily stop. In former times, when vested rights and long exercised authority made large corporations more or less indifferent to the general welfare, such a method possibly would have been the only way to bring about the much desired result. It is not well, however, for the public to be as arbitrary in the exercise of power as corporations were long thought to be, and under the changed conditions of recent times such exercise of power is not necessary. An intelligent commission to gather the facts and bring all the interests into harmony and to recommend such legislation as will cover the situation should perhaps be the first step. But this situation has become so serious that action should not be delayed.

The methods of treatment to prevent pollution are:

First, mine waters. When mine waters carry sufficient free acid or acid sulphates to destroy plant life, a simple treatment with lime or powdered limestone will completely destroy this acid action and prevent injury to plant life.

The cost of such treatment will not exceed 1½ per cent. per thousand gallons treated. It is impossible to give any estimate of the investment required, as no data is at hand as to the quantity of such waters to be treated. This process is actually in operation at the mines of a large corporation situated on the headwaters of the Ohio River near Pittsburgh. Threatened litigation with the city of Pittsburgh forced the company to so treat their waters, and it happened that because of the large quantity of iron sulphate car-

ried by these waters, a process of treatment could be worked out, using finely ground limestone as a neutralizing agent, which yielded a valuable by-product, thus rendering the treatment a source of profit rather than expense.

Second—Treatment of breaker waste

waters to prevent pollution would consist of two steps.

From these waters would first be removed the granular coal which is suitable under certain conditions as a steam coal and is the logical raw material for the briquetting industry, to produce an additional source of domestic fuel. If the coal recovered in this way were briquetted, four million tons annually could be recovered. As a raw material for the briquetting industry, this fine coal is worth at least 50¢ per ton. Thus the gross annual value would be two million dollars.

The total cost of the recovery plants by a process of straining and settling, for the anthracite region would be about three million dollars. At 50¢ a ton for the product the profit to the coal companies should be 15 cents a ton.

In other words, such recovery would pay for the plant within three or four years. In order to make such recovery financially attractive, development of the market for briquettes as a domestic fuel in the United States is necessary. Such development is gradually taking place and with a well thought-out scheme on conservation, the development of the briquetting industry could be materially hastened.

PLEASSED THAT ROADS MUST PAY PART OF EXPENSE OF THE BINGAMAN STREET BRIDGE

Kidslog 2 2/13/20

City and county officials concerned in the erection of the Bingaman street bridge declared that they are much gratified at the decision reached by the state public service commission in naming \$75,000 as the amount which the Pennsylvania and Reading Railway companies will have to pay toward the construction of the new bridge.

Attorneys of all parties concerned, Wellington M. Bertolet, for the city, and Adam B. Rieser, for the county of Berks, presented their case to the commission early last January. The decision was handed down on Thursday.

It provides that the Pennsylvania Railway Co. is to pay \$50,000 of the amount and the Reading Co. \$25,000. In the case of the former the money is to be paid in installments of \$12,500, and the Reading shall make payments of \$6,250. Half of the money is to be paid to the city and the other half to the county.

The case was argued for the city by Mr. Bertolet, and he was assisted in the preparation of it by Mr. Rieser. Except to say that he is "much gratified," Mr. Bertolet did not discuss the case.

A CONFERENCE

Next Monday afternoon members of City Council will meet with the county commissioners to discuss the matter of constructing a spur or "ramp" to the bridge so that there will be an approach on South Third street. Citizens in this district have agitated the matter and it has been considered by the city planning commission. After the officials have discussed the proposed addition thoroughly they expect to call a general conference for the purpose of hearing the citizens advocating the erection of the ramp.

Councilman Dampman declared that the addition could be placed to the bridge at any time as easily as an addition can be made to a house. This plan was considered when the bridge was first talked of," said Mr. Dampman, "but these people have waited until this time to present the case."

ORDERED TO VACATE.

The county commissioners have sent notice to the property owners and tenants in the houses in the vicinity of the new Bingaman street bridge to vacate the premises by March 1. This action is taken by an order issued by the public service commission. The contractors are ready to proceed with the work. There are 18 properties on Bingaman street that must be removed under the plans for the new bridge.

COAL DIRT IN RIVER CHANNEL

Reading Eagle - 7/1
MAY CAUSE DAMAGE DURING SPRING FRESHETS

Restricts Navigation. The filling up of the channel and the midstream section of the stream cause the water to shoal, restrict navigation to a very narrow channel kept open only by dredging and when the spring floods come, aggravates the rise from the fact that the river bed is so shallow that the stream spreads out over considerable area on both sides, causing great damage.

Culm, consisting mostly of pulverized coal dirt, has filled up the channel of the Schuylkill River to such an extent, within the city limits, from the various colliery operations in the anthracite regions in Schuylkill county that it is feared that enormous property damage will result during the thaws and consequent freshets next spring.

So alarming is this condition that Mayor Filbert notified Thomas J. Lynch, member and secretary of the water supply commission of Pennsylvania, at Harrisburg, and received a prompt reply. Mr. Lynch states that a representative of the commission will come to Reading within a few days to interview the mayor on the subject, make a survey of the condition of the river bed and channel, after which the commission upon his report will determine what steps shall be taken to rectify the matter.

The Schuylkill slowly, but surely, has been robbed of its natural beauty and navigable advantages by the culm washed down stream from Schuylkill county. The river from source to mouth, from Pottsville to tidewater, has been permanently marred. However, it is believed that if the cause is abolished in time the river can again be restored nearly to its original condition.

The Letter.

The mayor's letter to Mr. Lynch follows:

"The channel of the Schuylkill River, within the city limits, has been filling up with culm, presumably from the various colliery operations in Schuylkill county, to such an extent that the condition has become alarming.

"I desire to call your attention to this matter with the hope the commission will cause an immediate investigation in order that the existing plight be modified and the cause stopped, for I am sure the usual spring thaws and freshets will result in enormous damage due to this artificial use."

Property of
HISTORICAL ASSOCIATION
Port Clinton, Pa., 1954

Hakbuck, Lock #36 Elev 365 1/4

CARGO.

CONSIGNMENT.

DATE

INSTRUCTIONS AT

OLD BOATMAN "SAILED" CANAL WHEN 1,550 BOATS PLIED ITS PLACID WATERS

The protests of a landlord that he must have more rent means nothing in the life of Capt. Samuel W. Duffert, erstwhile navigator and farmer, who resides with his family, as he calls it, composed of himself and his dog Bruno in his little cabin on the canal boat. The Item, now in winter quarters at Waterloo, one mile north of Hamburg, on the Schuylkill canal.

In the shadows of one of the highest points in the Blue Mountain in Berks, snugly nestled among eight

old, being one of a large family. When he was 19 he "shipped" on a canal boat. For 10 years he followed this occupation and when he married, he engaged in farming in the vicinity of Pottsville. Later he was in the transfer business and when his wife died he returned to the old life and asserts that the little cabin on the Item will be his home until he dies.

Mr. Duffert bemoans the fact that the canal is not used to a greater degree for the hauling of freight, just as it was when he made his first trip to Philadelphia from Schuylkill Haven. At that time, he

closed after that, due to the culm washed into the channel.

Coal was not the only freight hauled on the boats in the first days of the canal. Large cargoes of grain and merchandise were hauled down the canal to points south of Phoenixville. On the return trip the boats were loaded with the products of the mills located along the water front. Several times during the season a load of watermelons was purchased in Philadelphia at the rate of four cents each. These were disposed of en route to the coal regions to block tenders and others for from 15 to 20 cents each. Booting at that



Capt. Samuel W. Duffert at the Tiller of His Boat. To His Left Is His Faithful Dog, Bruno.

other large canal freighters, lies The Item. When the boating season is over, the boats are steered into the eddy and after the water is drawn, they are high and dry on the bottom of the cove. With the culm-filled bottom of the canal on the one side and the bleak mountains on the other, the outlook during the winter is none too pleasant for this aged boatman, but he is happy and leads a contented life.

Capt. Duffert has been leading a boatman's life for many years, but he was a farmer for some time

according to the aged boatman, one canal freighter took as many as 13 trips to Philadelphia in one season. The boat he was employed upon at that time went as far as Troy, N. Y., Wilmington and Chester. He had many narrow escapes on these trips and a number of times was thrown overboard by the tow line while going through the locks. How he escaped drowning he is unable to say, for he says he swims like "an iron wedge."

The boats usually carried 200 tons of coal to the sea coast and for that service the owner of the barge received 50 cents a ton. The company

time proved a profitable business, but during the long winter months the mules had to be fed and the employees on the boat received their monthly pay.

The trip from Schuylkill Haven to Philadelphia required five days and on the return, when the boat was not as heavily laden, it required but three days. In early spring a great deal of time was usually lost due to high water. During one of these freshets Mr. Duffert had a narrow escape in Felix's dam, near Tuckerton. The river was high and the boat was making straight for the breast of the dam. Careful steering



View at Waterloo Showing the Canal Boats "Parked" in the Cove, the Quarters Since the Canal Was Drawn Off.

when he thought he had tired of the hard life of a canal "sailor." The longing for the old life was too strong and he again "shipped" with the Schuylkill Navigation Co. 10 years ago. Since the canal has been closed the major portion of the way from Port Clinton to Philadelphia, the only boating done is between the former place and Hamburg, the boats conveying the washery coal to the latter place.

First "Shipped" at 19.

Born in Dreiberville, Schuylkill County, July 2, 1856, Mr. Duffert, after attending the schools of the district, was employed on a farm. He was compelled to earn his clothing from the time he was eight years

would furnish the three mules and the coal was loaded on the boat and unloaded at its destination. The duty of the skipper was to see that the boat reached the point to which the coal was billed. When a trip was taken to New York the price per ton was usually 60 to 70 cents a ton. Last season when he hauled the washery coal from Port Clinton to Hamburg he received 37 cents a ton under the same conditions.

1,550 Boats in Those Early Days.

When Mr. Duffert started boating there were 1,550 boats on the canal and last season there were but 30. It was eight years ago that he made his last trip to Philadelphia, the lower section of the canal being

by Mr. Duffert finally headed the boat into the locks.

Dogs His Own Cooking.

Capt. Duffert does his own cooking on a stove in his cabin and on Monday morning any one passing along the state highway near the "parking" space of the canal boats can see his week's wash hanging on the line at the stern. He sleeps in a bunk at one side of his compartment. His sleep is untroubled for at his side lies his faithful dog Bruno, and directly overhead hangs his trusty muzzle-loader which has been his protection from his first trip on the canal. He is living a simple life with no cares to burden the years still ahead of him.

PORT OF

CANAL BOOMERS TO MEET HERE *Pta. Eagle 1/20/20.* WANT STATE AND FEDERAL AID FOR WATERWAY

Canal Convention Program
10:00 A. M.—Opening session.
3:00 P. M.—Business session.
6:00 P. M.—Dinner and open forum.

At the Schuylkill Canal Improvement Association meeting, at the Berkshire Hotel on Wednesday, Mayor John K. Stauffer will deliver the address of welcome at the opening session.

Rev. Scott R. Wagner will offer prayer, and Jere H. Barr, first vice president of the Chamber of Commerce; Ernest J. Poole, president of the Manufacturers' Association of Berks county; W. U. Barr, president of the Rotary Club, and Rev. H. Y. Stoner, president of the Kiwanis Club, will deliver messages of greetings at the business session.



JACOB W. H. GLASS.

The mayor and Council, with various other city officials, will attend the canal convention in a body.

In order to take part in the meeting of the association, Council will hold a brief session Wednesday morning and will then adjourn to the convention at the Hotel Berkshire.

J. W. Glass, chairman of the executive board and first vice president of the association, has been assured by city officials of their interest in the project.

COUNCILMAN ACTIVE.

Councilman D. Elmer Dampman, treasurer of the convention, will have his clerk to assist him at the convention. "The city of Reading should show a keen interest in this movement, and I propose to perform my duties as treasurer of the convention in an efficient and creditable way and help make the convention a success," was the statement made by Councilman Dampman.

The Chamber of Commerce, Rotary Club, Kiwanis Club and Manufacturers' Association of Berks County will be represented by delegates.

STATE TO BE REPRESENTED.

Mr. Glass received a telegram from Secretary of Internal Affairs James F. Woodward, saying that he cannot come himself, but that Messrs. Craig and Lehman, engineers, will be at the convention.

Judge Moyer, of Schuylkill county, sent word that he will be at the convention all day. "I hope the canal will be reopened so that coal may be shipped direct by canal from Pottsville to Boston."

DATE.

No. of.

CARGO.

CHARACTER OF.

ONLY 33 BOATS ON THE CANAL

Ridge Eagle 12/20/59

TEN OF THEM WINTERING IN SPRUCE STREET BASIN

Icebound in the Spruce street basin of the Schuylkill Navigation Co. are 10 of the 33 canal boats that are still in service, representing the pitiful remnant of the once proud fleet of more than a hundred coal carriers that brought their cargoes of anthracite to Reading and all the way to tidewater.

There was no sign of life about the boats. Not even a watchman could be found by the shivering reporter as he plodded through the snow that covered the frozen surface of the basin. Climbing up the side of the first boat by grasping an overhanging chain, the reporter gained the white-mantled deck.

Negotiating the rather perilous trip from bow to stern, along the port side of the listed deck, the reporter with his gloved hand and lying prone scraped the concealing snow from the stern plate. Mayor Chase was the name that he read.

This he recognized as one of the oldest boats in the service of the company, a boat that has made hundreds of round trips from Port Clinton to Philadelphia and that has carried thousands of tons of coal.

Continuing his examination by visiting in turn the nine other boats, he found that they are the Ranger, Dove, Unity, Safety, John Henry, John Henderson, Walters, Surf and Bruce.

New Steam Dredge.

Operations had been started on the construction of a new steam dredge for use next spring and summer to deepen the culm-filled channel at places along the canal and river route from above Hamburg to points below Reading. Work was halted by the zero weather and the snow.

The reporter was informed at the drydock of Captain John Hiester, at the foot of Sixth street, that work will be pushed by the navigation company on this dredge throughout the winter, whenever the weather is favorable, so that it will be completed in time for service early in April. The navigation company has only two serviceable dredges at present and the new steam dredge will be a valuable addition.

At Hendricks' coal yard at the foot of Bingham street, the reporter

learned that only 33 canal boats remain in the navigation company's fleet.

Boats Deserted.

He had been surprised to find the boats in the Spruce street basin deserted. Visits to this basin in previous winters had found some of the boats occupied by the captains and their families. He had rather expected to see smoke pouring from the stove stacks that protrude from the upper cabin decks. But every boat was untenanted, cold, bleak and inhospitable.

There is only one captain remaining in the employ of the Schuylkill Navigation Co. He is Capt. Jim Duffert, who has been with the company many years. He is the sole survivor of the hardy group of men who piloted the boats that carried the heavy coal cargoes from the loading docks at Port Clinton to points en route along the river, including Hamburg, Leesport, Reading, Birdsboro, Pottstown, Phoenixville, Norristown and Philadelphia.

Some Boats to Baltimore.

Many of these boats took the inland water trip to Baltimore and Washington, from Philadelphia. Capt. Duffert was one of the pioneers. He now represents a calling that has fallen into evil days.

Railroad competition and the indifference of officials have relegated the Schuylkill canal from its once important position, to a water route of little consequence. There is again hope that it will be restored to full usefulness. Efforts are being made by a newly formed association to interest the federal government to appropriate a huge sum for the purpose of again placing the Schuylkill canal in the ranks of important inland waterways.

Capt. Duffert is living on board his boat which is wintering in the basin at Hamburg. There are two other boats there. Capt. Duffert is living alone in his cabin. Previous winters found the cabins of all these boats tenanted by their captains and in many cases the captains' families.

Where They Are.
There are 10 boats at Reading, three at Hamburg, eight in Pack's Dam, six miles north of Reading, and the 12 remaining boats of the fleet of 33 are moored in the six-mile canal level, which starts at the Big Dam (Klapperthal) and ends at Birdsboro.

All of these boats are icebound uncared for, practically neglected and will so remain until next spring. All but one—the boat on which Captain Duffert is living.

Although there are 33 boats remaining, the Schuylkill Navigation Co. has only 12 mules. These mules are quartered for the winter in the company stables at Leesport. Four of these animals have been in service for more than a dozen years.

As they munch their oats during the long winter months and as the snow drifts through chinks in their stalls, if they are reminiscent and philosophical, who can picture their thoughts? They played an important part in the heyday of Schuylkill navigation. They were in service when the heavily laden boats passed hourly through all the lock chambers between the anthracite fields and Philadelphia. And they remain in the service, to witness the day when the passage of a boat in the canal through Reading is quite an event.

Up to three years ago, although the service had fallen off materially, the round trip from Reading to Port Clinton was negotiated in three days. A coal dealer in Reading could then send an empty boat from this city on a Monday morning and it would return here on a Wednesday evening filled with a precious cargo of 17 tons of coal.

Last summer the few boats that made the passage between Reading and Port Clinton required three weeks to negotiate the round trip. This made the cost prohibitive. Culm-filled channels, which caused the heavy tows to foul the bottom, requiring hours to effect a clearance, was responsible for this excessive tardiness.

This condition made it impossible for the navigation company to get men who were willing to handle the boats. The captain and crews are paid at so much a trip, or on a tonnage basis. Slow trips means small money.

The result has been that Capt. Duffert is the only remaining river man who has not deserted the company for a more remunerative job on land."

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HISTORICAL ASSOCIATION
Port Clinton, Pa., 19549

TO SAVE CITY FROM FLOODS

Play down culm

ENGINEERS STUDY CULM AND COAL DIRT MENACE

George S. Beal, an engineer of the state water supply commission, called on Mayor Filbert at City Hall. He was sent here by Thomas J. Lynch, secretary of the commission, following a request by the mayor that the state body take some action to relieve conditions in the Schuylkill River at Reading.

The stream is becoming so shallow from deposits of culm and coal dirt washed down stream from the coal region that it is feared property will be seriously endangered during the flood period following spring thaws.

Mayor Filbert explained the situation to Engineer Beal and introduced the latter to City Engineer Ulrich. The two engineers spent the afternoon following the course of the river from a point above Flusheim, the northern city limit, to a point below the river fronting property of the Reading Iron Co., south of Jackson Lock, below the southern city boundary. Engineer Beal may stay here several days.

That other agencies in Reading have taken cognizance of the rapid filling up and the marring of the historic Schuylkill by culm and coal dirt was evidenced in a report received by City Council from the city planning commission.

It requested permission for the Schuylkill Navigation Co. to use as a dumping ground for dirt dredged from the river bed along the stretch of the stream in the "second level" north of Flusheim. The city owns a five-acre plot at Leisz Bridge. William H. Luden promised to pay the expense of hauling the dirt from the dredge to the city plot.

Stauffer and Ruth Agree.

A separate communication from Asst. Nissley, of the Schuylkill Navigation Co., together with Mr. Luden's offer, was attached to the report.

After the report was received Councilman Stauffer declared that he is in sympathy with the efforts of the organizations and individuals to improve the conditions of the river bed, but objected to use of the city plot as dumping grounds. He said that it would result only in temporary relief.

High water next spring would wash the culm dumped on the river bank on the city plot, he said, back into the stream, and the purpose of the effort would be defeated. Councilman Ruth agreed with him. The report will be given further consideration in conference.

DATE.

No. of.

CARGO.

CHARACTER OF.

VETERAN ON CANAL SIGHS FOR OLD DAYS

Captain Winfield S. Giles, 39 Years on Job, Recalls Busy Scenes on Manayunk Waterway

NOT IN BED FOR 25 YEARS

He has outlived fourteen bosses, kept the same job thirty-nine years, is afraid of nothing on earth, and doesn't believe in sleep.

That's Captain Winfield S. Giles, seventy years old, and canal inspector for the Schuylkill Navigation Company at Shawmont, above Manayunk. The canal celebrated its one hundredth anniversary Tuesday.

There's nothing languid about Captain Giles, although he hasn't slept in a bed for twenty-five years. "Cat naps" are his only offering to Morpheus. It's his boast that he's on the job nineteen hours a day.

A team of oxen pulled the first canal boat through in 1820. Giles took his first job on the canal in 1861, when he was ten years old.

His father was a lock tender at the Little Reading Dam, two miles below Reading. Men were scarce on account of the war, so the boy went to work, and has been at it ever since. Always he has worked along the canal, with the exception of three years on a tug-boat, when he "shipped" as a deck hand and raised himself to a captain.

The Captain wears the badge of a special officer on his shirt and a sea captain's cap.

His ruddy, smile-lined face, weather-beaten with a half century's sun, wind and rain, shows no sign of weariness. It reflects the quiet and cleanliness of the lock-house at Flat Rock Dam, where he spends most of his time. Half of the house is in Philadelphia county and half in Montgomery county.

The office which takes up part of it contains a bed, which is ten years old, but has never been slept in.

"When the Boss gave it to me," Giles explained, "he said, 'Winfield, I want you to get at least six hours' sleep out of the twenty-four,' but I haven't had time to do it yet. I guess if I ever do lie down that long it'll be to die," he added.

THE BENCH-MARK AND SEA LEVEL

JOYFUL summer riders in automobiles, seeing more of their country in a day than some of their ancestors saw in a lifetime, occasionally find themselves, in the hilly States, breathing the diamond-clear air on the high curves of a commanding eminence which overlooks many square miles of the surrounding regions, and forms an impression of "the kingdoms of this world" that will linger, an unfading picture, in the memory.

And if such persons pause under the shade of a clump of far-seen, sky-aspiring elms, and clamber to the tip-top of the hill, they may come upon an official-looking, marked and lettered stone, which the inhabitants thereabouts will tell them, "with an air of mingled pride and respect, is a 'government bench mark.' "

A bench-mark is one of the most convincing tokens of scientific civilization. Whatever world possesses bench-marks has visual evidence to show that it is inhabited, or has been inhabited, by creatures of a high order of imagination, for a bench-mark is a symbol of planet measurement in three dimensions. It is a proof that, by mental operation, the level of the ocean has been extended under the land and across the continents, and that hills and mountains hundreds of thousands of miles from the nearest shore have been stood upon it as upon a floor, and their relative elevations measured with mathematical accuracy.

In a word, a bench-mark tells how high the spot where it stands is, not above its immediate surroundings, but above the common base of the terrestrial living world—i. e., the surface of the all-encompassing sea. "Surface" here refers to the mean level of the sea, and not to its level at either high or low tide.

The placing of bench-marks must be one of the most fascinating occupations that men have found for utilizing their time on the earth. It is the work of engineers, and an engineer is an adventurer in the completest sense of the word.

He is pioneer, traveller, pathfinder, explorer, wayfarer, mountaineer, seeing everything, doing everything, prepared for everything, an athlete in body and mind, an adept in observation and in calculation, using the astronomer's stars, the surveyor's chains and staves, the climber's ropes, the farmer's spade, the miner's pick, the mariner's compass, the cook's pot and pan, the hunter's rifle, the fisherman's lure, the boatman's oars, the woodman's axe, besides possessing a working knowledge of geology, mineralogy, botany and at least first

aid medicine and surgery—in short, a true "all-around man," a credit to his planet. There are times when I wish that fortune had made me an engineer. No engineer was ever candidate for president; his life is too interesting.

Now, when you stand beside some lofty benchmark, engulfed in the high-rolling waves of summer wind, try to look straight down through the hill and see the blue sea-level surface ideally extended beneath it, and forming its mathematical base, which places it on a common platform with all the mighty heights of the world—Andes, Himalayas, Kuen-Luns, Rockies—and then picture the engineer, the level-finder, of the Coast and Geodetic Survey, laboriously, systematically, with hand and eye and brain working in perfect co-ordination, he lifted a parallel of the sea surface to the roof of the continent.

Step by step such work has to be done. The globe curves, and the sea curves with it. The engineer must eliminate the effect of the curvature, so that at every stage the plumb line is normal to the line of sight over the level. His multitude of little tangent lines, each successively higher or lower, as the land rises or falls, blend into a smooth curve in calculation, and so follow the profile of the globe.

If he had brought a bit of the sea along with him it would have balanced itself gravitationally level at every observation point. But from point to point it would have been lifted higher above the level of the great sea. If the sea should suddenly swell and rise and overflow the continent, its surface would, in succession, flow a sparkling film of water, over each higher and higher bench-mark on the hills, until it flooded the highest of them all, and left America submerged under a spherical water surface, the tip of its nose in the Rockies, just breaking the smooth shield with a sparkling ripple at the touch of a breeze.

The mean sea-level ought to be the datum plane for all surveying, but, unfortunately, it is not universally used. I learn from Mr. E. Lester Jones, the Superintendent of the United States Coast and Geodetic Survey that there are cities and even states in the Union which use datums of their own, a custom calculated to cause confusion, and ultimately great trouble and expense for correction.

In New York the public work datum plane is nearly three feet above the mean sea level as determined by actual observation at Sandy Hook, and the Dock Department datum is over two feet below that standard.

Garrett P. Serviss.



CAPTAIN WINFIELD S. GILES
For thirty-nine years inspector on the Manayunk Canal which observed its 100th Anniversary Tuesday.

He is subject to call day and night, having charge of the inspection, repair and control of the canal from Tide-water to Norristown.

"Life on the canal isn't what it used to be in the good old days when there were transportation stations all along and when 1,400 boats carrying coal, lime and stone, and hundreds of passengers plied along it," he said.

"The crowds were rough, the life was rough, and your life wasn't worth a nickel if you couldn't handle a gun as quickly as the other fellow."

"But, nowadays, the most excitement I get is telling the fellers and girls that come up in canoes to put on more clothes."

"It's perfectly scandalous the few clothes they think they can get away with. There was one girl came up this week. She is one of them there things you calls an aristocrat. I know her; she lives in Germantown, and has been coming up the canal for the last five years."

"Every year she puts on less clothes, and that day I just got mad. She had on one of those one-piece things, most awfully scanty and close-fitting, and I just said to her, 'Miss, have you any clothes in that boat?' and she said, 'Yes,' so I told her to put them on or else I'd lock their boat in."

"You see the gosh-darned carryings-on along this canal! Girls come along in canoes all painted up like some of Dan Harris' clowns, with a patch of white on their noses, one on their chin, and a couple of spots of red on each cheek."

"When I scold them they say 'Giles, you're getting old,' and I tell them I may be getting old, but I'm mighty active."

Giles has four sons and one daughter, and is grandfather of eleven children.

The canal's water supplies motive power for Manayunk mills and the hydro-electric plant at the foot of DuPont st.

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Port Clinton, Pa., 19549

DATE.

a.

1000-TON BARGE CANAL TO TAP LEHIGH VALLEY

Proposition Aimed to Realize to the Full the Vast Possibilities of the Delaware Water Route and Greatly

to Energize Pennsylvania Industries

Public Ledger

Written for Business Section of Public Ledger

1/10/49

By THOMAS B. STOCKHAM

Chairman of Civic and Traffic Bureau, Morrisville, Pa., Chamber of Commerce

IT HAS been said that the Delaware River is the Clyde of America, but the time is not far distant when the Delaware River shall be the synonym for shipping and shipbuilding in all the languages of the world. From Wilmington to Trenton; from Morrisville (opposite Trenton) to Easton; from Easton (up the Lehigh) through Bethlehem and Allentown to Mauch Chunk; from Bordentown, on the Delaware, across New Jersey, to the Raritan Bay; and from Delaware City on the Delaware, across the State of Delaware, to the Chesapeake, there are such wonderful water transportation possibilities as almost to stagger the imagination.

At the head of tide-water is situated Trenton, with vast industries of clay, iron and steel; across the river at Morrisville is building the largest freight yard in the United States and to these two places is now dredged a twelve-foot channel. Ninety-odd miles above are the largest anthracite deposits of the country. Connecting these mines is an antiquated canal which, built for barges to carry 110 tons of coal, has been allowed to silt up so that it will now float only eighty-five tons to a bottom. Thus the choking of canal traffic has made it unprofitable for boatmen to carry on business. Along this canal are three large industrial cities, Easton, Bethlehem and Allentown.

The advantages of the New Jersey ship canal and the purchase and enlargement of the Delaware and Chesapeake Canal are manifest by the fact that they are now a part of the Congressional program for the Atlantic Deeper Waterway System so tirelessly advanced under the leadership of Representative J. Hampton Moore. And now we desire to direct attention to other possibilities for the development of the Delaware and Lehigh Valleys.

Reported to Canal Commission

The Morrisville Chamber of Commerce has caused to be made a superficial survey of the Delaware and Lehigh Canals and has made a report to the canal commission of the United States railroad administration giving facts and making recommendations for a reconstructed canal from Morrisville to Mauch Chunk. This report recommends the construction of a 1000-ton barge canal from tide-water in the Delaware River at Morrisville and Trenton to Coal Port (one and one-half miles above Mauch Chunk). There are two separate canals, one running from Bristol along the Delaware to Easton, and the other from Easton along the Lehigh River to Coal Port.

At Morrisville the canal traverses a course within fifty feet of the Delaware. It is proposed to extend the navigable channel one-half mile through the western end of the river at this point to the place where the canal approaches so near the stream, and by two locks with a total lift of 31.5 feet, convey the traffic from the river into the canal to Easton and Mauch Chunk.

A summary of the findings of this committee reveals that there are eighteen locks from Morrisville to Easton, twenty-five locks over all to Bristol, and by reconstruction into a modern barge canal, three locks will take the place of eight of the present locks, with two added at Morrisville and five eliminated to Bristol, making fifteen modern locks from Morrisville to Easton, with a total lift of 171.25 feet for a distance of 49.5 miles. There are three dams in the Delaware to Easton, the first at Taylorville and Washington Crossing, the second at New Hope and Lambertville, and the third at Lumberton and Raven Rock.

Details of Needed Construction

The Lehigh Canal proper has fifty-two locks, six of which are flood locks, leaving forty-six lift locks. By combination in a reconstructed canal, ten can be eliminated, leaving thirty-six operative locks, with a lift of 392.25 feet from the Lehigh River at Easton to the same at Coal Port, a distance of 48.5 miles. This division enters the Lehigh River nine times, traversing the same a distance of 14.5 miles. To reconstruct this waterway thirty-four miles of canal would be rebuilt and 14.5 miles of river dredged.

There are ten dams in the Lehigh River to Mauch Chunk, together with the three in the Delaware and the one at the mouth of the Lehigh at Easton, which make a total of fourteen. There flows over the breasts of these dams vast quantities of unharvested water, which, properly utilized, would generate millions of horsepower, by hydro-electric plants, to operate the locks and boats of a modern barge canal and to supply tremendous power to the great industries of the Lehigh and Delaware Valleys.

The total distance from Morrisville to Coal Port is about ninety-eight miles; the total lift from tide-water to the end of the canal, piercing the heart of the anthracite regions, is 563.5 feet; the

CONSIGNMENT.

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total number of lift locks over the whole canal as it now is is seventy-one, and by a reconstructed barge canal, this number will be reduced to fifty-one. This cutting off of twenty locks means a saving of about 40 per cent in time of locking and resultant operating expenses.

Present Waterway Obsolete

The failure of the canal to do its part is that its operation and facilities have not changed in the whole eighty-odd years of its existence. It has not kept pace with the times: coal cars have grown from twelve to fifty-ton capacity and the link coupling and hand brake have been replaced by the modern drawbar coupling and airbrake. While the canal barge capacity has really decreased, and the methods of locking and operating the canal are as slow and antiquated as if we were still living in the days preceding the Mexican War.

The railroads of the country, in the crisis of the European war, were unable to carry the freight given them, and many industries of this region were hampered in production because of embargoes. The period of reconstruction and expansion would intensify this condition in such a great industrial center as the Delaware and Lehigh Valley regions, unless the remedy be applied promptly.

Easton, at the mouth of the Lehigh, has more than forty industries such as car works, foundries, factories of brass and iron, paint and chemical manufacturers, textile and knitting mills and extensive cement plants; Bethlehem, with twenty-five industrial plants, has, first of all, the great steel mills of the same name and others of knitting and silk, and many foundries; Allentown has numerous industries engaged in the manufacture of baskets, belt dressing, belting, boots and shoes, foundries, machine work and cement while Catasauqua, Northampton, Slatington, Palmerton and Mauch Chunk collectively have more than forty-five industries engaged in the mining of slate, the manufacture of silk, iron and steel, cement and knitted goods, and the great zinc works at Palmerton, second in size to the Bethlehem steel plant.

It may be noted that 79 per cent of all the slate quarried and manufactured in the country comes from this region; that 36 per cent of all the cement manufactured is taken out of these same hills, and that, most important of all, millions of tons of hard coal are taken from the foundations of these mountains.

d.

Advantages of Water Route

Mr. Schwab has said that he will unload at the port of Philadelphia if the railroads will make better rates. Why not eliminate the railroads? H. E. Lewis, vice president of the Bethlehem Steel Company, stated to our committee that his company received from South America about 2,500,000 tons of ores a year and shipped it to New York and then by rail to Bethlehem. With a 1000-ton barge canal, freight rates by rail need not be a consideration, as his ships could come up the Delaware to Philadelphia and tranship to barge for tow to Morrisville, and thence to Bethlehem by canal.

Mr. Lewis further said that in normal times his company received about a million and a half tons of soft coal from West Virginia by an all-rail route. This coal could be shipped to Baltimore and then make an all-water trip to the plant.

If such a canal could receive about 4,000,000 tons of freight for one plant alone, northbound, allowing for any exigency for the curtailing of this amount, we have the entire industries of the Lehigh Valley to make up the balance necessary to make this canal run full capacity northbound. No other canal to the coal regions can expect such returns upon the money invested as this.

More Prestige for Philadelphia

The capacity of a 1000-ton barge canal is 10,000,000 tons freight per annum. The New York Barge Canal is such. It is 300 miles long and cost \$142,000,000 to build. It is not expected to run full capacity for twenty-five years or more, but is considered a good investment and a far-sighted project by the people of the State of New York. How much more valuable must a canal be to run from the Lehigh industrial center to the Atlantic coastal system, when it seems evident that it will run at least 80 per cent capacity the first year of operation?

This waterway would tap the inland waterway almost midway between Boston and Norfolk. It could supply all the great cities of the Atlantic Coast with coal, cement, slate, lime, iron, fabricated steel and numerous other manufactured commodities.

Let Philadelphia help make this thought a reality. It will give her better rates, better service and more prestige. If co-operation is spelled M-i-s-s-i-p-p-i, why not spell it also D-e-l-a-w-a-r-e?

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JY 12, 1911.

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DATES OF MANY
IMPORTANT EVENTS
WHEN SOME LOCAL OCCUR-
RENCES TOOK PLACE.

A LIST WORTH PRESERVING.
COMPILED BY AN EAGLE RE-
PORTER.

Inquiry is frequently made through the Eagle for dates of important events of local, State and national importance. They include fires, horrors, explosions, etc. The following are a few worthy of note:

Jan. 9, 1889—Wreck of silk mill and Reading Railway paint shop by a cyclone. A number of lives were lost.

March 11 and 12, 1888—Big blizzard and general tie-up of railroad traffic.

Feb. 8, 1895—Blizzard and tie-up of railroads, especially the East Penn and Lebanon Valley.

May 24, 1877—Burning of the Scott Works.

Oct. 24, 1892—Rose Glen wreck.

Jan. 15, 1872—Stichter's hardware store burned.

Floods in the Schuylkill—1851; Sept., 1869; May, 1894, and Feb. 28, 1902.

May 12, 1890—The Reading changed the running of its trains on the Reading division from left to right.

Jan. 10, 1842—The Reading road was opened to Pottsville.

Monday, April 20, 1857—The roof of Reading Company's shop at Seventh and Chestnut streets collapsed from heavy snow.

April, 1866—The Reading Company's car shop was opened for business.

Sept. 19, 1890—Shoemakersville wreck.

Oct. 14, 1892—Parade of Reading's school children.

Feb. 6, 1891—Destruction by fire of Sternbergh & Son's Bolt and Nut Works.

July 2, 1888—Burning of the Reading Hardware Company's plant.

July 22, 1877—Burning of the Lebanon Valley railroad bridge by rioters.

July 23, 1877—State militia fires into crowd at Seventh and Penn streets.

April 14, 1877—Strike of the B. L. E. of the Reading.

Oct. 4, 1877—Wreck on the Picketing Valley branch of the Reading.

Oct. 18, 1884—William M. Kelchner, Superintendent of Signals, was killed near Exeter.

Dec. 27, 1887—Knights of Labor strike.

Locomotives Explode.

The following were some of the locomotives which exploded in the early days:

Neverlink, Tuesday, March 2, 1847.

Engineer, Monday, May 1, 1848.

Perkiomen, Monday, March 28, 1859.

Patapsco, Monday, Oct. 14, 1867.

Iowa, Monday, Dec. 23, 1867.

Santee, Monday, July 12, 1869.

Annapolis, Monday, Dec. 20, 1869.

Sherman, Thursday, April 14, 1870.

Swatara, Monday, Sept. 5, 1870.

June 1, 1889—Great flood in the Susquehanna River at Williamsport. Stream reached 33 feet 6 inches above low water mark at 10 p. m. of that date.

June 23, 1890—Wreck at Tucker-ton.

April 20, 1891—P. H. & P. branch opened for business to Shippensburg.

May 7, 1893—Opening of the Reading terminal, Phila.

March 15, 1894—Engine 893, drawing No. 2 express on the Reading, John Driscoll, engineer, made the distance, three miles between Leesport and Tuckerton, in 75 seconds, the fastest time on record.

Feb. 22, 1896—Gordon Planes were abandoned.

The foot bridge at the P. & R. station was started in the fall of 1886 and placed in service early in the summer of 1887. It is used by hundreds of thousands of people annually.

Establish Hall Signals.

The Hall signals were established on the Reading as follows:

Aug. 1, 1896—Mt. Carbon to Port Clinton.

July 3, 1897—Port Clinton to Dauberville.

Jan. 1, 1900—Dauberville to Reading.

Dec. 15, 1899—Reading to Birdsboro.

Dec. 1, 1899—Birdsboro to South End.

July 6, 1901—Reading to Sinking Spring.

July 27, 1901—Sinking Spring to Robesonia.

Aug. 10, 1901—Robesonia to Pleasanton.

Sept. 11, 1901—Prescott to Cleona, through to Harrisburg in November.

First Penn equipped in fall of 1887 and winter of 1911.

May 1, 1889—East Penn road laid by the Reading.

Dec. 3, 1874—Reading passenger train was opened for business.

July 1, 1897—The Reading took over the Perkiomen road.

On account of the flood in the Susquehanna river, freight and passenger trains of the Penn's Railroad were running via the Lebanon Valley and Main Line of the Reading.

May evening, March 4, 1904. Passenger trains were discontinued Sunday.

March 6 and freight Tuesday, March 8. Passenger trains were again sent via Reading Monday, March 7.

The Spring street subway was started Tuesday, Nov. 12, 1907, and officially opened Thursday, April 1, 1909. Trains resumed schedule speed over the subway at 5 p. m. Monday, April 26, 1909.

Nov. 24, 1909—Big wreck on the Frackville branch.

May 12, 1899—Exeter wreck.

March 5, 1902—Heavy snow storm.

Feb. 21 and 22, 1902—Great sleet storm. All wires prostrated. Communication cut off for several days.

It was the worst storm on record. The damage to the wires in Eastern Penn's amounted to many thousands of dollars. It required weeks to straighten out the tangle.

Feb. 13, 1899—Destruction by fire of Mohr's hat factory.

Great Chicago Fire.

Oct. 8, 1871—Great Chicago fire; loss \$190,000,000. It swept over 3 1/2 square miles. More than 98,000 people were rendered homeless and over 250 persons lost their lives.

Nov. 9, 1872—Sixty-five acres of the city of Boston were laid waste by fire. More than 800 buildings were destroyed. The property loss was \$80,000,000.

The greatest fire that ever visited New York was Dec. 16, 1835, when 674 buildings were consumed with a total loss of \$17,000,000.

London's greatest fire broke out Sept. 2, 1866, lasting four days. Eighty-nine churches and many public buildings and 13,200 houses were destroyed. About 200,000 persons were made homeless. The ruins covered 456 acres.

Portland, Me., was destroyed by fire July 4, 1866. The loss was \$15,

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MEANS GOOD HEALTH

To enjoy such, drink POTTSTOWN LAGER BEER,
brewed the Old German Style, and from the finest
Malt and Hops.

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Berks County Distributing Company

BOTH PHONES

954 PENN STREET

000,000 and 10,000 persons were rendered homeless.

In Phila., in 1850, 350 buildings were burned at a loss of \$1,500,000.

May, 1851, 2,500 buildings were burned in San Francisco at a loss of \$3,500,000.

The forest fires in Michigan and Wisconsin in the fall of 1871 wiped out 2,000 human lives, besides the destruction of millions of dollars worth of timber.

An \$8,000,000 Blaze.

Paterson, N. J., was visited by a fire Feb. 9, 1902, entailing a loss of \$8,000,000.

May 3, 1901—A fire at Jacksonville, Fla., did damage to the amount of \$10,000,000.

Feb. 7, 1904—Baltimore was swept by flames, entailing a loss of \$85,000,000. It started on a Sunday.

Nov. 13, 1904—Snowstorm and general prostration of wires.

The Boyertown Tragedy.

Jan. 13, 1908—Boyertown Opera House horror, when 171 men, women and children perished.

April 18, 1906, at 5:15 A. M.—San Francisco was visited by a terrible earthquake, followed by the destruction by fire of a great portion of the city.

May 31, 1889—Johnstown flood, in which many hundreds of lives were lost.

Feb. 10, 1889—Blizzard and delay to traffic.

Dec. 25 and 26, 1909—Twenty and one-fourth inches of snow fell in this city.

Nov. 6, 1888—Wreck of the stack at the Robesonia furnace.

Nov. 6, 1884—Explosion of the Volcanic Powder Works near Stouchsburg.

Sinking of the Maine.

Feb. 15, 1898—Sinking of the Maine in Havana Harbor.

Feb. 2, 1897—Old State Capitol at Harrisburg destroyed by fire.

Feb. 1, 1911—Great dynamite explosion at Jersey City. Central Railroad station ruined. Thirty people killed.

July 2, 1862—First car hoisted over Mahanoy Plane; placed in operation in October of the same year.

Sunday, Nov. 13, 1904—Snow, rain and sleet. Wires prostrated and town in darkness.

June 26, 1870—Reading car shop destroyed by fire.

Sept. 21, 1905—Pay car of the Reading wrecked in collision near Moore Hill, P. H. & P. branch.

Sunday, Feb. 5, 1911—Electric interlocking plant installed at Oley street.

The Reading's new locomotive shop, on North Sixth street, was started in 1902 and finished in 1903.

Monday, Oct. 27, 1902—Opening of the Belt Line.

Thursday, Aug. 27, 1901—P. & R. engine 206, built at the Reading shop, reeled off five miles in 3 minutes 26 4-5 seconds. One mile was made in 39 4-5 seconds. The trial was made on the New York division. This engine was the fleetest of its size ever constructed in this city.

October, 1879—Introduction of the telephone by Henry W. Spangler. The exchange was located in the Eagle Building.

Sept. 1, 1883—Introduction of electric street lights.

Nov. 27, 1888—First electric car was run on the East Reading road.

August, 1874—The first street car was run on Sixth street.

PLAN MANY SOCIAL EVENTS FOR THE COMING SUMMER

Julius Kaufmann New President of the Mt. Olympus Family Circle.

With the enthusiastic officers recently elected, the Mt. Olympus Family Circle will introduce a number of original novelties in the line of entertainment at the club house located on the east slope of Mt. Penn, near the Eagles' Home.

The building, which is artistic in appearance, is equipped with all the modern and latest improvements.

Establish Hall Signals.

The Hall signals were established on the Reading as follows:

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First Penn equipped in fall of 1887 and winter of 1911.

THE GREATEST NAVAL DEMONSTRATION IN THE HISTORY OF THE WORLD

FACTS AND FIGURES RELATING TO MIGHTY ARMADA WHICH AMERICA IS SENDING TO PACIFIC--JAPAN'S WARLIKE PREPARATIONS

The greatest naval demonstration in the world's history, and the assembling of the biggest armada of warships ever seen on any sea, will take place when the 51 fighting ships of the Pacific fleet meet off San Francisco. The great fleet that sailed the English Channel at the jubilee of Queen Victoria could not stand up against it.

The fleet that dotted Oyster Bay when President Roosevelt reviewed his fighting army numbered but 35 ships.

The rendezvous at Hampton Roads when the great nations of the earth sent representative ships, numbered 38 American vessels and 12 foreign ships.

The Pacific fleet will be made up of the following:

First-class battle ships	19
Armored cruisers	8
Protected cruisers	6
Gunboats	6
Torpedo boat destroyers	6
Monitors	3

Whether it is a demonstration to warn Japan or a test cruise for men and ships, the eyes of the world are upon the United States.

Sixteen battleships, 500 feet long; masses of honeycombed steel, with the agility of a yacht; fitted with armor over a foot thick and shooting 13-inch shells to the horizon and beyond, will be in command of "Fighting Bob" Evans.

In company with the battleships, but on an independent voyage, will go a flotilla of six torpedo-boat destroyers, those scorpions of the navy that fly at an enemy in the dark, sting with a torpedo and disappear in the night with the speed of an express train.

Assembling in the Pacific are three floating fortresses, new battleships that have just left the shipyards. Joining them are eight armored cruisers, which are ships that deal as heavy a blow as a battleship, with the speed of an Atlantic liner, scouts and fighters too.

War and soldier, too. Nine big protected cruisers, six white-coated gunboats and three of the ugly, but fighting, monitors, will rendezvous off the Golden Gate.

When all shall have come together off San Francisco, there will be a fleet of 51 fighting machines. To this aggregation will be added a fleet of coal colliers, supply, repair and water vessels, making a total of about 70 defenders of the nation. The United States Navy now is the second naval power in the world. Only England has a greater fleet. Of necessity, the English ships must remain scattered among her dominions, on which the sun never sets. Can she match the formidable display of this, the greatest nation on earth?

Ten Miles of Ships.

Placed end to end, with bows and sterns touching, the ships would make a boulevard of steel along which one might walk four miles. Strung out at anchor in single file, the fleet would stretch away for 10 miles, which is nearly as far as the eye can reach at sea, and with the farthest ships hull down on the horizon. Anchored four abreast for a review—such as President Roosevelt steamed through at Oyster Bay and Hampton Roads—the four lines would stretch away for two and a half miles each.

In fact, the administration is sending its entire fighting strength to the Pacific. There will not be a battleship or an armored cruiser on the Atlantic Coast, nothing but gunboats and torpedo boats being left in the East. The 19 battleships to make the voyage cost over \$99,000,000 and are manned by over 18,000 men and 725 officers.

Manning the Pacific fleet are 30,000 officers and seamen. Were they formed into a parade the line would require four hours' time to pass a given point. As militia they would make 30 regiments of soldiers. There are but 35,000 men in the entire navy, so nearly the entire navy will be on the cruise.

The fighting machines bristle with a total of 2,184 guns. Were they placed 20 feet apart in the wall of a fort, the broadside would extend a length of eight miles, or make a square two miles long on each of its four sides.

The big guns that constitute the main batteries of the fleet number as follows:

Four-inch rifles	96
Five-inch rifles	450
Six-inch rifles	252
Seven-inch rifles	120

Eight-inch rifles	193
Ten-inch rifles	14
Twelve-inch rifles	62
Thirteen-inch rifles	20

Total 1,180

The publication of the fact that during target practice on the British Channel fleet in the presence of King Edward one gun made 19 hits in 21 shots, thereby earning a decoration from the King, naturally touched the pride of the American naval officers. They have looked into the records of the American gun pointers and have found no reason to fear a comparison with the gunners of any other navy.

Taking some of the six-inch guns

in the Atlantic fleet, one gunner on the armored cruiser Maryland made 11 shots and 11 hits in one minute. A gun on the battleship Ohio was fired with a perfect score at the rate of 10.81 a minute. A six-inch gun on the battleship Maine has a record of perfect score at the rate of 10.41 a minute, and the battleship Missouri's record was 10.30 shots a minute, each lodged in a target.

But in the way of small guns these six-inch records become insignificant. A three-pounder on the battleship Virginia made 20 shots and 20 hits in 75 seconds. Another gun made 10 shots in 10 minutes in 22½ seconds, a remarkable average of 26.67 shots and hits a minute.

The battleship Illinois, that holds the target record of the navy at the present writing, made a per cent. of 75.782 in using all guns.

The crew of the after turret on the Alabama has made 11 straight hits with the 13-inch gun.

\$7,000,000 FOR COAL.

The voyage will cost Uncle Sam millions. It will take 253,000 tons of coal to get only the battleships and torpedo-boat destroyers around to the Golden Gate. The cruise will take four months' time, and the coal bill will be \$2,000,000. To this must be added the bill for four months' maneuvering of a fleet of 51 ships on the Pacific, which will mean \$3,000,000 more. Then it will require \$2,000,000 additional fuel and four months' time to get the fleet back into the Atlantic, making a total of \$7,000,000.

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COUNCILMEN AIR PHILADELPHIA'S FILTRATION PROBLEM

PERKIOMEN URGED AS CHEAPER THAN RIVAL WATERSHED

Continued From First Page

Perkiomen-Tohickon sheds would flow to an equalizing basin on the outskirts of the city by gravity, whereas the supply from the Delaware-Schuykill project would have to be pumped.

Universal metering throughout the city was urged by these speakers as a means of cutting down the waste of water. Mr. Fuller declared that this would have the effect of bringing the city's total water demands well within the capacity of the Perkiomen-Tohickon system, making it necessary to go to the Torresdale intake for water only when there shall be a prolonged drought.

Joseph Steinmetz, vice-president of the Engineers' Club, endorsed the idea of universal metering, argued earnestly for the high pressure that is a part of the Perkiomen plan and urged Philadelphians to turn away from the notion of river water and think in terms of water from the Poconos. This also was the theme of General Russell Tracy. He read his argument for steam now upon a supply to be derived wholly from the mountains in Northeastern Pennsylvania.

Former Chief of the Bureau of Water Carleton E. Davis, now of Indianapolis, made a strong plea for adoption of the Perkiomen-Torresdale plan of water control. He emphasized the principle that Philadelphia should divorce itself as soon as possible from both the Delaware and Schuykill as sources of the city's supply.

Philadelphia is doing that, he said, when it makes a beginning by going to external upland sources such as the Perkiomen and the Tohickon. The water derived there, he said, will be automatically purer than by others coming either from the sources of the Lehigh or the upper Delaware.

Councilman Hall brought out from Mr. Davis as he had from previous witnesses the fact that the Perkiomen-Tohickon-Torresdale plan would give the city two widely separated sources of supply.

"A double supply is a double safeguard," said Davis, in reply to this question by Hall. He also stressed the advantage of increased pressure which could result from the Perkiomen system.

Chlorine as Purifier Condemned

Paul A. Maignen, a water engineer and filtration expert who came from twenty-five years ago from Paris, condemned the use of chlorine as a water purifier. He declared he had a device by which river water may be purified.

C. P. Landreth told of an electrolytic apparatus which, he declared, will rid raw river water of bacteria and bacilli. He offered to demonstrate his device, and said the cost of operation would be only \$5 million gallons.

Dr. William Kastell, Director of Health, referred to the official reports as proof that the city's present filtration and chlorination methods have prevented typhoid fever. "This indicates a sanitary water supply," he said.

Irvin H. Bardman, editor of the Schwenksville Item, called as spokesman for a delegation from the Perkiomen Valley, said they had come only to listen that later they might make a plea against destruction of their valley and the drying up of the Perkiomen below the proposed dam.

Director Biles questioned on this point by Mr. Hall, assured the delegation that, even in a drought, more than 5,000,000 gallon daily would flow from the great reservoir through the lower valley.

The hearing opened with the Mayor's announcement of his purpose in urging open discussion of the question.

"In my judgment, as during the campaign, I stressed the prime necessity for a larger and improved water supply. That no mistake might be made, and millions of dollars wasted in a haphazard or partisan selection of source for this new system, I promised the people of Philadelphia, that I would appoint a commission of experts, headed by the Director of Public Works, to sift through all of the possible sources, the one best suited to serve, not only the present but future needs of the City would be selected."

"In redemption of that solemn promise, and recognizing that the problem was a highly technical one, I cast about for the best possible talent to compose this commission. After mature investigation and consideration, appointed George H. Biles, Director of Public Works; S. M. Seal, Commissioner to the Mayor; Alexander Murdoch, Chief of the Water Bureau, and four preeminent experts and water engineers, Joseph F. Hasskarl, George W. Fuller, Allen Hazen and J. Waldo Smith.

"At the Commission's first meeting, I charged it specifically, to be absolutely non-partisan and impartial in its considerations solely in the interest of the public welfare, best suited to serve the City's needs. Not at any time either before or since the Commission made its report, have I heard challenged, either the competency or the integrity of any of its members.

That being the fact, we must necessarily assume that the investigation and deliberations of the Commission were conducted with intelligence and ability and that it arrived at its conclusions honestly and efficiently.

Findings Given to Council

The Commission reported to me a summary of its findings and recommendations. This report I transmitted to City Council and the Water Property of the City Committee for full examination and action. As soon as it is in proper shape the Commission will also furnish you with the supporting data upon which its summary or report is based.

"I know it is needless for me to suggest the fullest review by your Committee of the Commission's findings and recommendations. The members of the Commission are in attendance upon your Committee and have prepared to answer all questions and make all necessary explanations of the report. I know too, you will afford every opportunity to those who have criticized the findings and recommendations of the Commission, when that criticism is constructive, impersonal and non-partisan. I know leave the matter in the hands of this Committee, with full knowledge that it will not act hastily, that it will insist upon all honest facts being established, that it will proceed in its examination, consideration and action, as called for. I have been with but a single thought, the securing for the people of Philadelphia the best water supply available.

Former Chief Dunlap was then called. He read his statement slowly, impressively, every person in the crowd that jammed the room following every word tensely. As he read, he paused at times to look directly at Mayor Kendryv.

Mr. Dunlap said:

"Your chairman has very kindly invited me to give you my views on a new water supply for Philadelphia. I shall endeavor to do so, in a few plain statements.

"It is agreed, I believe, that Philadelphia must as a matter of common decency abandon the present Schuykill and Delaware River supplies. But to follow by chlorination has made the water supplied from these sources non-disease bearing in the past and there is a possibility that they may continue to do so as long as the filters and the chlorinating machinery properly function.

"The Schuykill water, while not so dangerously polluted from sewage as the Delaware River at Torresdale, has at irregular periods very disagreeable taste and odors that treatment will not

remove. These odors and tastes are not disease-bearing, they do not come from human excrement, they are due to vegetable growth, and that remains in the public mind, more objectionable than filtered sewage that is clear, sparkling and palatable—that is, if you shut your eyes and don't question whether you are the first or the fourth one that has drunk this same water during the past month.

List of Recommendations

"The plans and recommendations of the present commission are briefly as follows:

"1. Supply ample for the next fifty years, which they estimate to be 500,000,000 gallons per day.

"2. Development of the Perkiomen and Tohickon water sheds, which will supply 250,000,000 gallons per day, ample for one-half the supply required at the cost of \$91,500,000.

"3. The retention of the present source of supply from the Delaware River at Torresdale for the next fifty years, for the remaining half of the city.

"4. The lower Delaware River is good enough for one-half of the city, why not for the other half. This plan would only cost about \$10,000,000, and would make available more funds for the city beautiful.

"5. To build a filter plant, eliminate all doubt as to the efficiency of the supply, every gallon taken out would be turned to the river available for further use, thereby establishing the vicious circle the nearest approach to perpetual motion yet discovered.

"I have considerable supporting data on this matter, which I will give you later or publish for the information of the people who must drink this water."

Audience in Serious Mind

As Chief Dunlap finished, there was a distinct stir throughout the room, but no applause came for him nor for any member of the audience. It was a seriously-minded audience, one that was plainly hungry for facts. It seemed for a moment that Councilman Hall was about to interrogate Dunlap at the close of the statement, but no question came. The former chief of the Water Bureau glanced at Chairman George Connell who conducted the proceedings in a most business like manner, and then went to a seat in the rear of the room.

"It is evident that the commission, which was appointed last year, has been good, and that the members of the commission, who followed Mr. Dunlap, was examined and cross-examined more than any other speaker. His address was wholly extemporaneous. It was evident that he, more than any of his fellowmen on the commission, was trained and ready to vindicate the report they had prepared.

Statement by Fuller

Mr. Fuller, on being introduced as spokesman for the commission by Director Biles, said:

"Mr. Chairman and gentlemen of the committee: When this Water Supply Commission was appointed last February we were instructed to endeavor to make a recommendation which would provide for the very best water supply procurable within the limits of reasonable cost. We have had no indication made to us as to what was the view as to taking on any particular project, and this is, without qualification, the recommendation of our commission, this report, which is printed form, and is before you."

"The commission has had the opportunity to look into all these matters with a freedom from any entanglements, which is rather unique. I have in mind the commission of 1920, of which I was a member of the board of engineers. We were obliged at that particular time to deal with a project for the future which must be built piece meal, and progressively, in accordance with limited funds, which would be available from time to time. There is no such restriction here, and we have made the recommendation that the new source of supply for Philadelphia, and as it goes ahead, will provide for the future. This includes the Perkiomen and Tohickon creeks. It is going to take six or eight years to introduce the supply. In the meantime you people of Philadelphia have got to get along and live with the water supply which you now have, and that is from the local rivers.

Question Studied 50 Years

"This whole question of the water supply of Philadelphia has been very studied for some time. Very comprehensive reports have been made, going back into the early '80's, the surveys of various upland sources, and which cover the surveys of various upland sources, the Perkiomen Creek, Schuykill, Tohickon, the upper Delaware, and the lower Lehigh.

"Now during this period of construction of some six or eight years, it is necessary to get along with these local river waters for financial reasons, and which was the recommendation in 1899 of the commission which looked into it at great length. The commission recommended the use of the local sewage water for financial reasons.

"At Walnupport, Northampton County, Pa., the water supply was contaminated by a nearby stream, while one reservoir was being cleaned—result, 56 cases of typhoid from a population of 1,000, thirty-one law suits. The jury awarded \$2,000 damages to the widow of one whose death was due to drinking this polluted water. Individuals have entered without legal cause for others, and it is likely that this course will be followed with the remaining cases.

"There are a number of instances where this has occurred. At Milwaukee in 1916, an attendant through a mistake shut off the chlorinating machine for a few hours, result, large number of cases dysentery appeared with five days; 238 local cases typhoid fever, 14 deaths. The full effect, however, will not be known as this is a tourist town, but infection was reported from as far East as St. Louis and Illinois points."

What Happened at Chicago

"At Chicago last November, through a combination of circumstances, the proper chlorine dosage was not applied resulting an epidemic.

"At Walnupport, Northampton County, Pa., the water supply was contaminated by a nearby stream, while one reservoir was being cleaned—result, 56 cases of typhoid from a population of 1,000, thirty-one law suits. The jury awarded \$2,000 damages to the widow of one whose death was due to drinking this polluted water. Individuals have entered without legal cause for others, and it is likely that this course will be followed with the remaining cases.

"At Santa Ana, California, in January this year, the water supply was contaminated for only a few hours, result, large number of cases dysentery appeared with five days; 238 local cases typhoid fever, 14 deaths. The full effect, however, will not be known as this is a tourist town, but infection was reported from as far East as St. Louis and Illinois points."

The Keystone that supports the commission's report is the retention of the present Delaware River supply for the next fifty years.

"Settle this point before going further. You gentlemen are not chemists, but you have good sense and judgment. You know that part of the 360 to 400 million gallon daily supply that is emptied into the Delaware River each day from Philadelphia and Camden must be carried by the tides to the Tacony, Delaware, and Schuylkill, and furnished to the people as drinking water. This condition is disgusting and in common decency should not be allowed to continue for a day longer than necessary."

Urge "City Decent"

"If you gentlemen recognize and appreciate these facts and appropriate funds to it until it will require from six to eight years to correct this vicious condition."

"Let us have a 'City Decent' before our borrowing capacity is exhausted by non-essentials, however beautiful they may be."

"Let the people decide this fall whether they want over one-half the city for the next fifty years to drink second-hand water? Even if it is sparkling, clear and palatable, it won't be palatable if you give any thought to its source."

"You cannot be honored with a high office unless you exercise your responsibilities. I don't think you want to do step them, but don't let lead out from the main issue which at the present time is the endorsement of the retention of the present sewage polluted lower Delaware River as a source of supply for the next fifty years, for more than one-half the city."

"The filters are as near fool proof as it is possible to make them, the operating organization is good, but accidents will happen in which event it will take more than a Philadelphia lawyer to es-

tablish your claim in either your own interest or that of the public.

"In approving this plan you will deliberately compel those that cannot afford or neglect to buy bottled water to drink filtered sewage for the next fifty years with the certainty that an epidemic will result from the first failure of the filters and chlorinating machinery, probably finding all of which you will be morally and the city financially responsible. I understand that damages have been awarded in every case that has been tried, and where the responsibility for the epidemic was proven.

"It is true that the typhoid death rate in Philadelphia has steadily increased and is second in the honor roll. If we are lucky we will stay there, but it will only take one mistake to put us at the other end of the roll. The menace is there twenty-four hours a day and 365 days a year."

"**Must Live With Conditions**"

"Then, what are you going to do during the six or eight-year period when you are going to take the water from the upland sources? This is what you have got to do. You have got to live with these existing conditions. Our commission has proposed that the Torresdale Intake should be greatly improved beyond the installation of intercepting sewers, and the elimination of the polluted matter in the lower Delaware.

"**What is your programme to be?**

"You will have to have water from upland sources. That is what the city of Philadelphia has been trying to do for many years. The commission has recommended to the Mayor, and to you gentlemen of Council, the proposition to take water from Perkiomen and Tohickon, and to divert the Torresdale intake for the next fifty years.

"**Upland Water Cheapest**"

"These particular upland sources are those which will allow the city of Philadelphia to get its upland water cheaper than from any other possible source. We do not say that it is a more desirable supply than from the Upper Delaware, or the Poconos or the Upper Lehigh, but that investment is beyond the negotiability of this city, not by the opinion of this commission, but by all the commissions. But this commission has recommended the Perkiomen and the Tohickon will give you the best water from upland sources, absolutely within the control of the State of Pennsylvania, all subject to your being hungry for facts.

"It is going to do more than that, to interrogate Dunlap at the close of the statement, but no question came. The former chief of the Water Bureau glanced at Chairman George Connell who conducted the proceedings in a most business like manner, and then went to a seat in the rear of the room.

"**It is going to do more than that, gentlemen. If you will go ahead in connection with our recommended programme for meterage, that is, if you put in meters, and cut down the consumption as regards needless waste-water not you really need for household purposes or industrial purposes, we will be able to get along with this average weekly 260,000,000 gallons and in the dryest weather 280,000,000 gallons, and if you are able to do that, at the end of six or eight years, you will be able to get along with practically no water from the Delaware at Torresdale.**

Situation in Ten Years

"**If you will go ahead with this programme you will find that at the end of ten, fifteen or twenty years a situation whereby you will be using no water from these local rivers. You will be using upland water under all ordinary circumstances. Perhaps at times it may be necessary to get some slight amount of the Torresdale water, but that can be done in a proper manner, and you will not be burdened with the upper basin, 162 square miles above the upper dam, and then there is 53 square miles between the upper and the lower dams, so the total is 215 square miles as against 307.**

"**Mr. Crossan: Have you any estimates in your commission data as to the cost of these attachments?**

"**Mr. Fuller: They are included in this \$91,000,000.**

"**Mr. Crossan: That includes the purchase of the land? The purchase of all water rights and consequential damages, all you can estimate.**

"**Mr. Fuller: Yet.**

Torresdale Intake Removal Hinted

"**Mr. Crossan: I am only speaking now as a man who lives in the district affected by the Torresdale plant and we are here to get the facts. Is there any reason why the Torresdale intake should be at Torresdale?**

"**Mr. Fuller: Do you mean as compared with taking it upstream?**

"**Mr. Crossan: Either up or down. If you took it down, would it make matters worse? Suppose you took it down to Front and Chestnut?**

"**Mr. Fuller: It would not help any.**

"**Mr. Crossan: Would it make it worse?**

"**Mr. Fuller: Yes, I think it would.**

"**Mr. Crossan: Suppose you took it up; would that make it better?**

"**Mr. Fuller: It is very debatable whether it would make it better to an extent worth its cost.**

"**Mr. Crossan: I am really speaking, Mr. Fuller, in the future in asking that question; that is, when the sewage disposal plants are completed, I have in mind, not today. I mean, will the character of Delaware water, upon the completion of those sewage disposal plants, be practically the same at Front and Chestnut as it will be at the County Line, say, as Bristol?**

"**Mr. Fuller: No, I think that the water at Bristol will be somewhat better.**

"**Mr. Crossan: Then, in other words, above Trenton it will be still better?**

"**Mr. Fuller: It is possible, but let me make plain that the float observations show that from Front and Chestnut there is no float up as far as Torresdale. Lehigh avenue is the southerly limit at which they have found that floats would move in the vicinity of Torresdale.**